

# MX2

## Born to drive machines

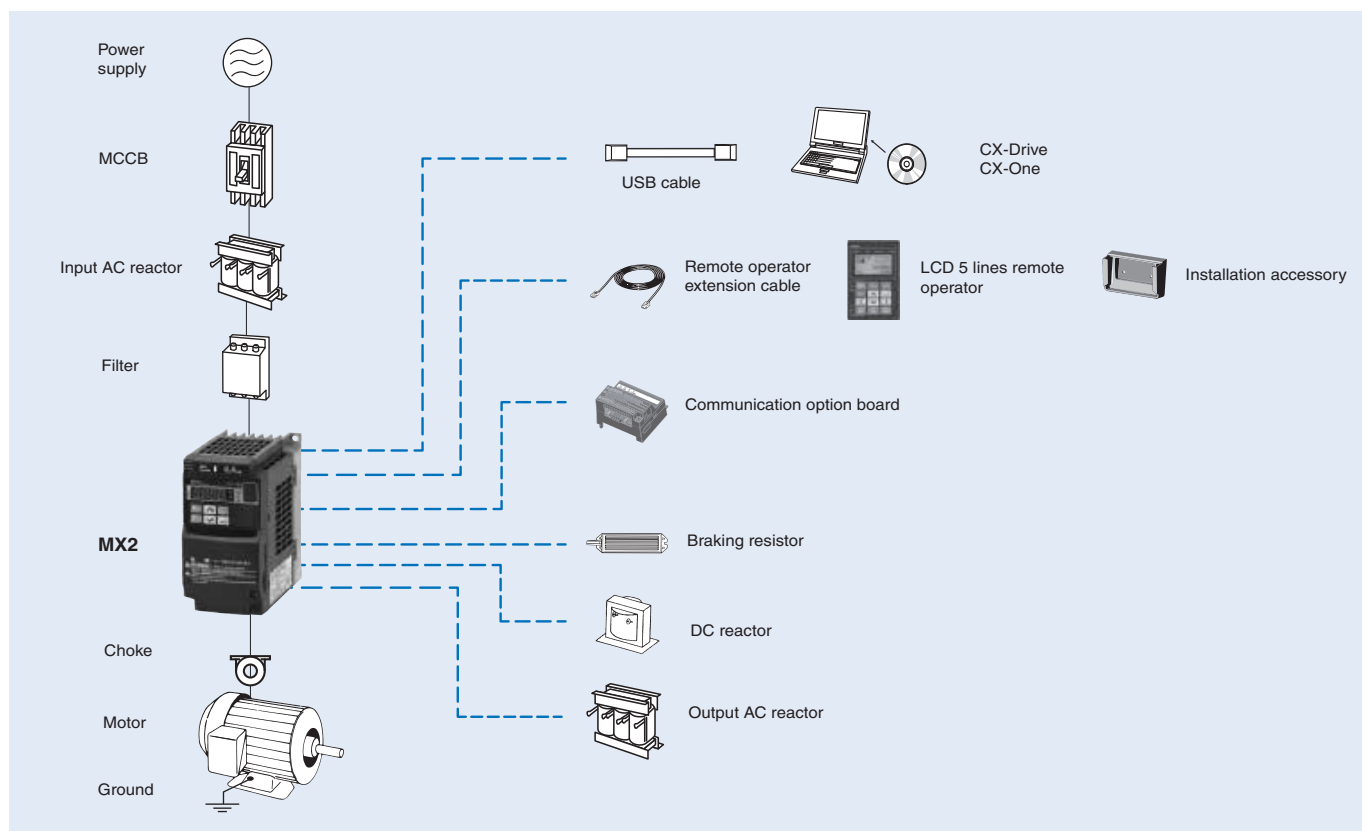
- Current vector control
- High starting torque: 200% at 0.5 Hz
- Double rating VT 120%/1 min and CT 150%/1 min
- IM & PM motor control
- Torque control in open loop vector
- Positioning functionality
- Built-in application functionality (i.e. Brake control)
- Built-in logic programming
- Safety embedded compliant with ISO13849-1 (double input circuit and external device monitor EDM)
- USB port for PC programming
- 24 VDC backup supply for control board
- Fieldbus communications: Modbus, DeviceNet, Profibus, CompoNet, EtherCAT, ML-II and EtherNet/IP
- PC configuration tool: CX-Drive
- RoHS, CE, cULus

## Ratings

- 200 V Class single-phase 0.1 to 2.2 kW
- 200 V Class three-phase 0.1 to 15.0 kW
- 400 V Class three-phase 0.4 to 15.0 kW

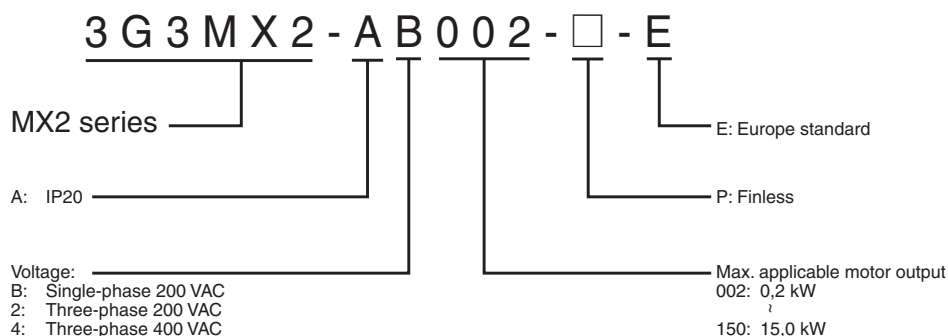


## System configuration



## Specifications

### Type designation



### 200 V class

| Single-phase: 3G3MX2-□    |                                   |                                                     | B001                                                            | B002 | B004 | B007 <sup>1</sup> | B015                           | B022       | -    | -    | -    | -    | -    |
|---------------------------|-----------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|------|------|-------------------|--------------------------------|------------|------|------|------|------|------|
| Three-phase: 3G3MX2-□     |                                   |                                                     | 2001                                                            | 2002 | 2004 | 2007              | 2015                           | 2022       | 2037 | 2055 | 2075 | 2110 | 2150 |
| Motor<br>kW <sup>2</sup>  | For VT setting                    |                                                     | 0.2                                                             | 0.4  | 0.55 | 1.1               | 2.2                            | 3.0        | 5.5  | 7.5  | 11   | 15   | 18.5 |
|                           | For CT setting                    |                                                     | 0.1                                                             | 0.2  | 0.4  | 0.75              | 1.5                            | 2.2        | 3.7  | 5.5  | 7.5  | 11   | 15   |
| Output<br>characteristics | Inverter capacity kVA             | 200 VT                                              | 0.4                                                             | 0.6  | 1.2  | 2.0               | 3.3                            | 4.1        | 6.7  | 10.3 | 13.8 | 19.3 | 23.9 |
|                           |                                   | 200 CT                                              | 0.2                                                             | 0.5  | 1.0  | 1.7               | 2.7                            | 3.8        | 6.0  | 8.6  | 11.4 | 16.2 | 20.7 |
|                           |                                   | 240 VT                                              | 0.4                                                             | 0.7  | 1.4  | 2.4               | 3.9                            | 4.9        | 8.1  | 12.4 | 16.6 | 23.2 | 28.6 |
|                           |                                   | 240 CT                                              | 0.3                                                             | 0.6  | 1.2  | 2.0               | 3.3                            | 4.5        | 7.2  | 10.3 | 13.7 | 19.5 | 24.9 |
|                           | Rated output current (A) at VT    |                                                     | 1.2                                                             | 1.9  | 3.5  | 6.0               | 9.6                            | 12.0       | 19.6 | 30.0 | 40.0 | 56.0 | 69.0 |
|                           | Rated output current (A) at CT    |                                                     | 1.0                                                             | 1.6  | 3.0  | 5.0               | 8.0                            | 11.0       | 17.5 | 25.0 | 33.0 | 47.0 | 60.0 |
|                           | Max. output voltage               |                                                     | Proportional to input voltage: 0..240 V                         |      |      |                   |                                |            |      |      |      |      |      |
|                           | Max. output frequency             |                                                     | 400 Hz                                                          |      |      |                   |                                |            |      |      |      |      |      |
| Power<br>supply           | Rated input voltage and frequency |                                                     | Single-phase 200..240 V 50/60 Hz<br>3-phase 200..240 V 50/60 Hz |      |      |                   |                                |            |      |      |      |      |      |
|                           | Allowable voltage fluctuation     |                                                     | -15%..+10%                                                      |      |      |                   |                                |            |      |      |      |      |      |
|                           | Allowable frequency fluctuation   |                                                     | 5%                                                              |      |      |                   |                                |            |      |      |      |      |      |
| Braking torque            |                                   | At short-time deceleration<br>At capacitor feedback | 100%: <50Hz<br>50%: <60Hz                                       |      |      |                   | 70%:<br><50Hz<br>50%:<br><60Hz | Approx 20% |      | -    |      |      |      |
| Cooling method            |                                   |                                                     | Self cooling                                                    |      |      |                   | Forced-air-cooling             |            |      |      |      |      |      |

- Three phase model use forced-air-cooling but single phase model is self cooling.
- Based on a standard 3-Phase standard motor.

### 400 V class

| Three-phase: 3G3MX2-□     |                                   |                                                     | 4004                                    | 4007 | 4015 | 4022               | 4030                           | 4040 | 4055 | 4075 | 4110 | 4150 |
|---------------------------|-----------------------------------|-----------------------------------------------------|-----------------------------------------|------|------|--------------------|--------------------------------|------|------|------|------|------|
| Motor<br>kW <sup>1</sup>  | For VT setting                    |                                                     | 0.75                                    | 1.5  | 2.2  | 3.0                | 4.0                            | 5.5  | 7.5  | 11   | 15   | 18.5 |
|                           | For CT setting                    |                                                     | 0.4                                     | 0.75 | 1.5  | 2.2                | 3.0                            | 4.0  | 5.5  | 7.5  | 11   | 15   |
| Output<br>characteristics | Inverter capacity kVA             | 380 VT                                              | 1.3                                     | 2.6  | 3.5  | 4.5                | 5.7                            | 7.3  | 11.5 | 15.1 | 20.4 | 25.0 |
|                           |                                   | 380 CT                                              | 1.1                                     | 2.2  | 3.1  | 3.6                | 4.7                            | 6.0  | 9.7  | 11.8 | 15.7 | 20.4 |
|                           |                                   | 480 VT                                              | 1.7                                     | 3.4  | 4.4  | 5.7                | 7.3                            | 9.2  | 14.5 | 19.1 | 25.7 | 31.5 |
|                           |                                   | 480 CT                                              | 1.4                                     | 2.8  | 3.9  | 4.5                | 5.9                            | 7.6  | 12.3 | 14.9 | 19.9 | 25.7 |
|                           | Rated output current (A) at VT    |                                                     | 2.1                                     | 4.1  | 5.4  | 6.9                | 8.8                            | 11.1 | 17.5 | 23.0 | 31.0 | 38.0 |
|                           | Rated output current (A) at CT    |                                                     | 1.8                                     | 3.4  | 4.8  | 5.5                | 7.2                            | 9.2  | 14.8 | 18.0 | 24.0 | 31.0 |
|                           | Max. output voltage               |                                                     | Proportional to input voltage: 0..480 V |      |      |                    |                                |      |      |      |      |      |
|                           | Max. output frequency             |                                                     | 400 Hz                                  |      |      |                    |                                |      |      |      |      |      |
| Power<br>supply           | Rated input voltage and frequency |                                                     | 3-phase 380..480 V 50/60 Hz             |      |      |                    |                                |      |      |      |      |      |
|                           | Allowable voltage fluctuation     |                                                     | -15%..+10%                              |      |      |                    |                                |      |      |      |      |      |
|                           | Allowable frequency fluctuation   |                                                     | 5%                                      |      |      |                    |                                |      |      |      |      |      |
| Braking torque            |                                   | At short-time deceleration<br>At capacitor feedback | 100%: <50Hz<br>50%: <60Hz               |      |      |                    | 70%:<br><50Hz<br>50%:<br><60Hz | -    |      |      |      |      |
| Cooling method            |                                   |                                                     | Self cooling                            |      |      | Forced-air-cooling |                                |      |      |      |      |      |

- Based on a standard 3-Phase standard motor.

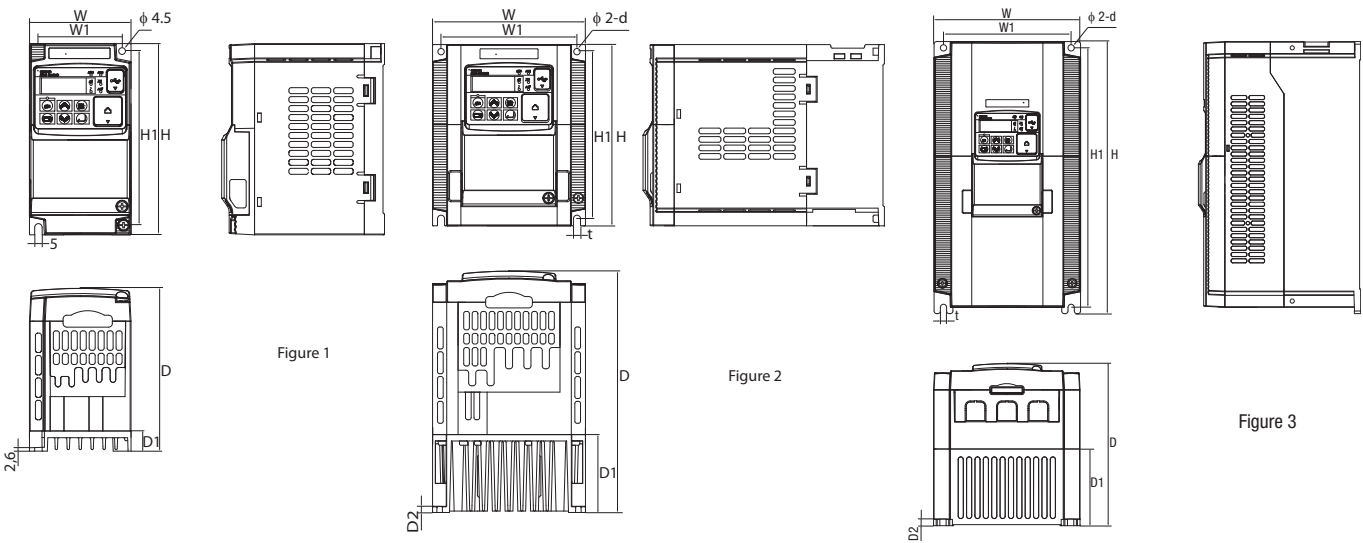
# Specifications

## Common specifications

| Model number<br>3G3MX2 |                                   | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control functions      | Control methods                   | Phase-to-phase sinusoidal pulse with modulation PWM (Sensorless vector control, V/F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                        | Output frequency range            | 0.10..400.00 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                        | Frequency precision               | Digital set value: $\pm 0.01\%$ of the max. frequency<br>Analogue set value: $\pm 0.2\%$ of the max. frequency ( $25 \pm 10^\circ\text{C}$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                        | Resolution of frequency set value | Digital set value: 0.01 Hz<br>Analogue set value: 1/1000 of maximum frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | Resolution of output frequency    | 0.01Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                        | Starting torque                   | 200% / 0.5 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | Overload capability               | Dual rating:<br>Heavy duty (CT): 150% for 1 minute<br>Normal Duty (VT): 120% for 1 minute                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                        | Frequency set value               | 0 to 10 VDC (10 K $\Omega$ ), 4 to 20 mA (100 $\Omega$ ), RS485 Modbus, Network options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                        | V/f Characteristics               | Constant/ reduced torque, free V/f                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Functionality          | Inputs signals                    | FW (forward run command), RV (reverse run command), CF1~CF4 (multi-stage speed setting), JG (jog command), DB (external braking), SET (set second motor), 2CH (2-stage accel./decel. command), FRS (free run stop command), EXT (external trip), USP (startup function), CS (commercial power switchover), SFT (soft lock), AT (analog input selection), RS (reset), PTC (thermistor thermal protection), STA (start), STP (stop), F/R (forward/reverse), PID (PID disable), PIDC (PID reset), UP (remote control up function), DWN (remote control down function), UDC (remote control data clear), OPE (operator control), SF1~SF7 (multi-stage speed setting; bit operation), OLR (overload restriction), TL (torque limit enable), TRQ1 (torque limit changeover1), TRQ2 (torque limit changeover2), BOK (Braking confirmation), LAC (LAD cancellation), PCLR (position deviation clear), ADD (add frequency enable), F-TM (force terminal mode), ATR (permission of torque command input), KHC (Cumulative power clear), MI1~MI7 (general purpose inputs for Drive Programming), AHD (analog command hold), CP1~CP3 (multistage-position switches), ORL (limit signal of zero-return), ORC (trigger signal of zero-return), SPD (speed/position changeover), GS1~GS2 (STO inputs, safety related signals), 485 (Starting communication signal), PRG (executing Drive Programming), HLD (retain output frequency), ROK (permission of run command), EB (rotation direction detection of B-phase), DISP (display limitation), OP (option control signal), NO (no function), PSET (preset position) |
|                        | Output signals                    | RUN (run signal), FA1~FA5 (frequency arrival signal), OL,OL2 (overload advance notice signal), OD (PID deviation error signal), AL (alarm signal), OTQ (over/under torque threshold), UV (under-voltage), TRQ (torque limit signal), RNT (run time expired), ONT (power ON time expired), THM (thermal warning), BRK (brake release), BER (brake error), ZS (0Hz detection), DSE (speed deviation excessive), POK (positioning completion), ODC (analog voltage input disconnection), OIdc (analog current input disconnection), FBV (PID second stage output), NDc (network disconnect detection), LOG1~LOG3 (Logic output signals), WAC (capacitor life warning), WAF (cooling fan warning), FR (starting contact), OHF (heat sink overheat warning), LOC (Low load), MO1~MO3 (general outputs for Drive Programming), IRDY (inverter ready), FWR (forward operation), RVR (reverse operation), MJA (major failure), WCO (window comparator O), WCOI (window comparator OI), FREF (frequency command source), REF (run command source), SETM (second motor in operation), EDM (STO (safe torque off) performance monitor), OP (option control signal), NO (no function)                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                        | Standard functions                | Free-V/f, manual/automatic torque boost, output voltage gain adjustment, AVR function, reduced voltage start, motor data selection, auto-tuning, motor stabilization control, reverse running protection, simple position control, simple torque control, torque limiting, automatic carrier frequency reduction, energy saving operation, PID function, non-stop operation at instantaneous power failure, brake control, DC injection braking, dynamic braking (BRD), frequency upper and lower limiters, jump frequencies, curve accel and decel (S, U, inversed U,EL-S), 16-stage speed profile, fine adjustment of start frequency, accel and decel stop, process jogging, frequency calculation, frequency addition, 2-stage accel/decel, stop mode selection, start/end freq., analog input filter, window comparators, input terminal response time, output signal delay/hold function, rotation direction restriction, stop key selection, software lock, safe stop function, scaling function, display restriction, password function, user parameter, initialization, initial display selection, cooling fan control, warning, trip retry, frequency pull-in restart, frequency matching, overload restriction, over current restriction, DC bus voltage AVR                                                                                                                                                                                                                                                                                                                               |
|                        | Analogue inputs                   | 2 analogue inputs 0 to 10 V (10 K $\Omega$ ), 4 to 20 mA (100 $\Omega$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                        | Pulse train input terminal        | 0 to 24 V, up to 32 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                        | Accel/Decel times                 | 0.01 to 3600.0 s (line/curve selection), 2nd accel/decel setting available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        | Display                           | Status indicator LED's Run, Program, Alarm, Power, Hz, Amps<br>Digital operator: Available to monitor 32 items: frequency reference, output current, output frequency...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                        | Motor overload protection         | Electronic Thermal overload relay and PTC thermistor input                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        | Instantaneous overcurrent         | 200% of rated current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        | Overload                          | Dual rating:<br>Heavy duty (CT): 150% for 1 minute<br>Normal Duty (VT): 120% for 1 minute                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Protection functions   | Overvoltage                       | 800 V for 400 V type and 400 V for 200 V type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | Undervoltage                      | 345 V for 400 V type and 172.5 V for 200 V type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                        | Momentary power loss              | Following items are selectable: Alarm, decelerates to stop, decelerates to stop with DC bus controlled, restart                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                        | Cooling fin overheat              | Temperature monitor and error detection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                        | Stall prevention level            | Stall prevention during acceleration/deceleration and constant speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                        | Ground fault                      | Detection at power-on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        | Power charge indication           | On when power is supplied to the control part                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | Degree of protection              | IP20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                        | Ambient humidity                  | 90% RH or less (without condensation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ambient conditions     | Storage temperature               | -20 $^\circ\text{C}$ ..+65 $^\circ\text{C}$ (short-term temperature during transportation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        | Ambient temperature               | -10 $^\circ\text{C}$ to 50 $^\circ\text{C}$ (Both the carrier frequency and output current need to be reduced over 40 $^\circ\text{C}$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                        | Installation                      | Indoor (no corrosive gas, dust, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        | Installation height               | Max. 1000 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Vibration              | Vibration                         | 5.9 m/s <sup>2</sup> (0.6G), 10 to 55 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

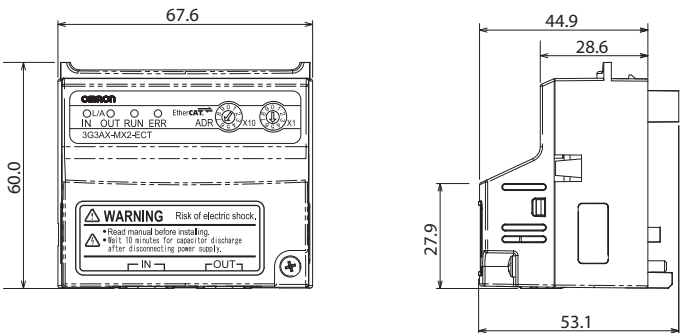
Dimensions

Standard models

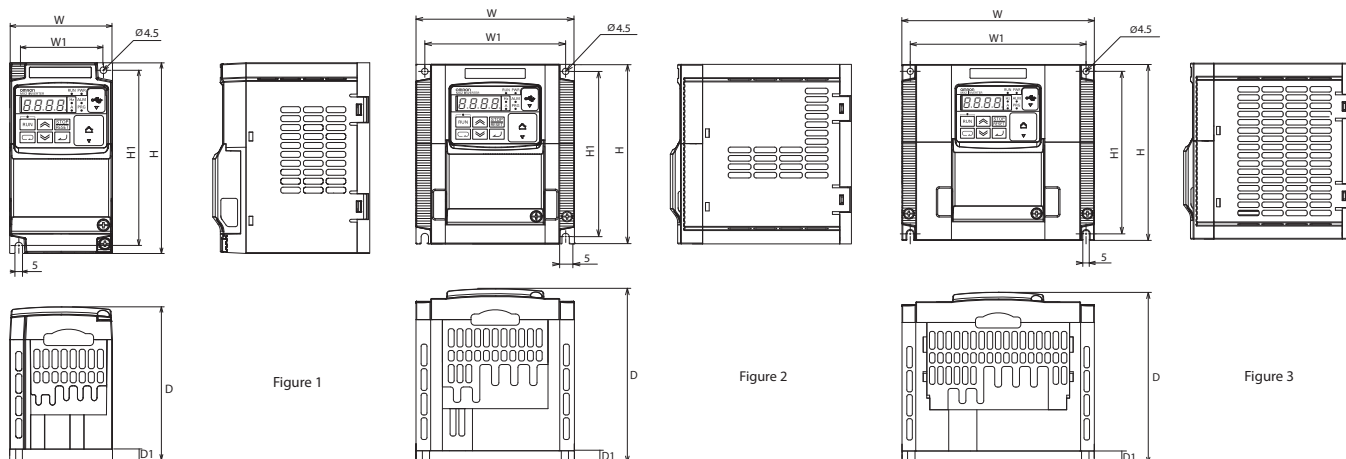


| Voltage class         | Inverter model<br>3G3MX2-A□ | Figure | Dimensions in mm |     |     |     |     |       |      |       |     |             |   |     |
|-----------------------|-----------------------------|--------|------------------|-----|-----|-----|-----|-------|------|-------|-----|-------------|---|-----|
|                       |                             |        | W                | W1  | H   | H1  | t   | D     | D1   | D2    | d   | Weight (kg) |   |     |
| Single-phase<br>200 V | B001-E                      | 1      | 68               | 56  | 128 | 118 | -   | 109   | 13.5 | -     | -   | 1.0         |   |     |
|                       | B002-E                      |        |                  |     |     |     |     | 122.5 | 27   |       |     | 1.0         |   |     |
|                       | B004-E                      |        |                  |     |     |     |     |       |      |       |     | 1.1         |   |     |
|                       | B007-E                      | 2      | 108              | 96  | 128 | 118 |     | 170.5 | 55   | 4.4   | 4.5 | 1.4         |   |     |
|                       | B015-E                      |        |                  |     |     |     |     |       |      |       |     | 1.8         |   |     |
|                       | B022-E                      |        |                  |     |     |     |     |       |      |       |     | 1.8         |   |     |
| Three-phase<br>200 V  | 2001-E                      | 1      | 68               | 56  | 128 | 118 | -   | 109   | 13.5 | -     | -   | 1.0         |   |     |
|                       | 2002-E                      |        |                  |     |     |     |     | 122.5 | 27   |       |     | 1.0         |   |     |
|                       | 2004-E                      |        |                  |     |     |     |     |       |      |       |     | 1.1         |   |     |
|                       | 2007-E                      |        |                  |     |     |     |     | 145.5 | 50   |       |     | 1.2         |   |     |
|                       | 2015-E                      | 2      | 108              | 96  | 128 | 118 |     | 170.5 | 55   | 4.4   | 4.5 | 1.6         |   |     |
|                       | 2022-E                      |        |                  |     |     |     |     |       |      |       |     | 1.8         |   |     |
|                       | 2037-E                      | 3      | 140              | 128 | 128 | 118 | 5   | 170.5 | 55   | 4.4   |     | 2.0         |   |     |
|                       | 2055-E                      |        | 140              | 122 | 260 | 248 | 6   | 155   | 73.3 | 6     | 6   | 3.0         |   |     |
|                       | 2075-E                      |        |                  |     |     |     |     |       |      |       |     | 3.4         |   |     |
|                       | 2110-E                      |        | 180              | 160 | 296 | 284 | 7   | 175   | 97   | 5     | 7   | 5.1         |   |     |
|                       | 2150-E                      |        |                  |     |     |     |     |       | 84   |       |     | 7.4         |   |     |
|                       | Three-phase<br>400 V        |        | 4004-E           | 2   | 108 | 96  | 128 | 118   | -    | 143.5 | 28  | -           | - | 1.5 |
| 4007-E                |                             | 170.5  | 55               |     |     |     |     |       |      | -     | -   |             |   | 1.6 |
| 4015-E                |                             |        |                  |     |     |     |     |       |      |       |     |             |   | 1.8 |
| 4022-E                |                             |        |                  |     |     |     |     |       |      |       |     |             |   | 1.9 |
| 4030-E                |                             | 1.9    |                  |     |     |     |     |       |      |       |     |             |   |     |
| 4040-E                |                             | 3      | 140              | 128 | 128 | 118 | 5   | 170.5 | 55   | 4.4   | 4.5 | 2.1         |   |     |
| 4055-E                |                             |        |                  | 122 | 260 | 248 | 6   | 155   | 73.3 | 6     | 6   | 3.5         |   |     |
| 4075-E                |                             |        | 180              | 160 | 296 | 284 | 7   | 175   | 97   | 5     | 7   | 3.5         |   |     |
| 4110-E                |                             |        |                  |     |     |     |     |       |      |       |     | 4.7         |   |     |
| 4150-E                |                             |        |                  |     |     |     |     |       |      |       |     | 5.2         |   |     |

Option board



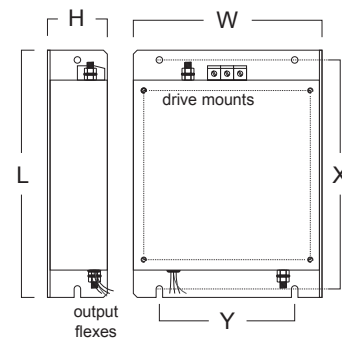
# Finless models



| Voltage class         | Inverter model<br>3G3MX2-A□ | Figure | Dimensions in mm |     |     |     |     |     | Weight (kg) |
|-----------------------|-----------------------------|--------|------------------|-----|-----|-----|-----|-----|-------------|
|                       |                             |        | W                | W1  | H   | H1  | D   | D1  |             |
| Single-phase<br>200 V | B001-P-E                    | 1      | 68               | 56  | 128 | 118 | 103 | 7.5 | 1.1         |
|                       | B002-P-E                    |        |                  |     |     |     |     |     |             |
|                       | B004-P-E                    |        |                  |     |     |     |     |     |             |
|                       | B007-P-E                    | 2      | 108              | 96  | 128 | 118 | 123 | 7.5 | 1.8         |
|                       | B015-P-E                    |        |                  |     |     |     |     |     |             |
|                       | B022-P-E                    |        |                  |     |     |     |     |     |             |
| Three-phase<br>200 V  | 2001-P-E                    | 1      | 68               | 56  | 128 | 118 | 103 | 7.5 | 1.1         |
|                       | 2002-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 2004-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 2007-P-E                    | 2      | 108              | 96  | 128 | 118 | 123 | 7.5 | 1.8         |
|                       | 2015-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 2022-P-E                    |        |                  |     |     |     |     |     |             |
| Three-phase<br>400 V  | 2037-P-E                    | 3      | 140              | 128 | 128 | 118 | 123 | 7.5 | 2.1         |
|                       | 4004-P-E                    | 2      | 108              | 96  | 128 | 118 | 123 | 7.5 | 1.8         |
|                       | 4007-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 4015-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 4022-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 4030-P-E                    |        |                  |     |     |     |     |     |             |
|                       | 4040-P-E                    | 3      | 140              | 128 | 128 | 118 | 123 | 7.5 | 2.1         |

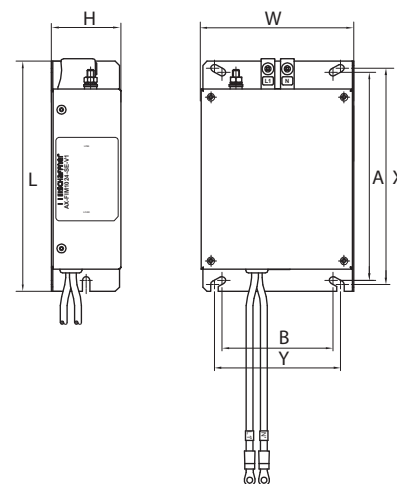
## Rasmi footprint filters

| Rasmi model |                | Dimensions |    |     |     |     |    |
|-------------|----------------|------------|----|-----|-----|-----|----|
|             |                | W          | H  | L   | X   | Y   | M  |
| 1x200 V     | AX-FIM1010-RE□ | 71         | 45 | 169 | 156 | 51  | M4 |
|             | AX-FIM1014-RE□ | 111        | 50 | 169 | 156 | 91  | M4 |
|             | AX-FIM1024-RE□ | 111        | 50 | 169 | 156 | 91  | M4 |
| 3x200 V     | AX-FIM2010-RE□ | 82         | 50 | 194 | 181 | 62  | M4 |
|             | AX-FIM2020-RE□ | 111        | 50 | 169 | 156 | 91  | M4 |
|             | AX-FIM2030-RE□ | 144        | 50 | 174 | 161 | 120 | M4 |
|             | AX-FIM2060-RE□ | 150        | 52 | 320 | 290 | 122 | M5 |
|             | AX-FIM2080-RE□ | 188        | 62 | 362 | 330 | 160 | M5 |
|             | AX-FIM2100-RE□ | 220        | 62 | 415 | 380 | 192 | M6 |
| 3x400 V     | AX-FIM3005-RE□ | 114        | 46 | 169 | 156 | 91  | M4 |
|             | AX-FIM3010-RE□ | 114        | 46 | 169 | 156 | 91  | M4 |
|             | AX-FIM3014-RE□ | 144        | 50 | 174 | 161 | 120 | M4 |
|             | AX-FIM3030-RE□ | 150        | 52 | 306 | 290 | 122 | M5 |
|             | AX-FIM3050-RE□ | 182        | 62 | 357 | 330 | 160 | M5 |



## Schaffner footprint filters

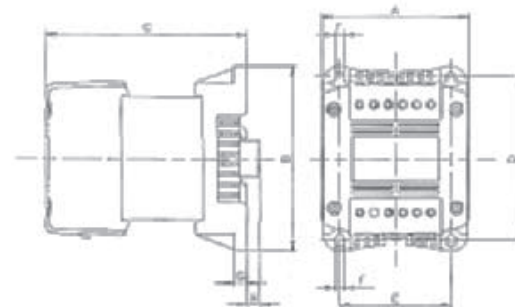
| Schaffner model |                | Dimensions |    |     |     |     |     |     |    |
|-----------------|----------------|------------|----|-----|-----|-----|-----|-----|----|
|                 |                | W          | H  | L   | X   | Y   | A   | B   | M  |
| 1x200 V         | AX-FIM1010-SE□ | 70         | 40 | 166 | 156 | 51  | 150 | 50  | M5 |
|                 | AX-FIM1014-SE□ | 110        | 45 | 166 | 156 | 91  | 150 | 80  | M5 |
|                 | AX-FIM1024-SE□ | 110        | 50 | 166 | 156 | 91  | 150 | 80  | M5 |
| 3x200 V         | AX-FIM2010-SE□ | 80         | 40 | 191 | 181 | 62  | 150 | 50  | M5 |
|                 | AX-FIM2020-SE□ | 110        | 50 | 166 | 156 | 91  | 150 | 80  | M5 |
|                 | AX-FIM2030-SE□ | 142        | 50 | 171 | 161 | 120 | 150 | 112 | M5 |
|                 | AX-FIM2060-SE□ | 140        | 55 | 304 | 290 | 122 | 286 | 112 | M5 |
|                 | AX-FIM2080-SE□ | 180        | 55 | 344 | 330 | 160 | 323 | 140 | M5 |
|                 | AX-FIM2100-SE□ | 220        | 65 | 394 | 380 | 192 | 376 | 180 | M5 |
| 3x400 V         | AX-FIM3005-SE□ | 110        | 50 | 166 | 156 | 91  | 150 | 80  | M5 |
|                 | AX-FIM3010-SE□ | 110        | 50 | 166 | 156 | 91  | 150 | 80  | M5 |
|                 | AX-FIM3014-SE□ | 142        | 50 | 171 | 161 | 120 | 150 | 112 | M5 |
|                 | AX-FIM3030-SE□ | 140        | 55 | 304 | 290 | 122 | 286 | 112 | M5 |
|                 | AX-FIM3050-SE□ | 180        | 55 | 344 | 330 | 160 | 323 | 140 | M5 |



## Input AC Reactor

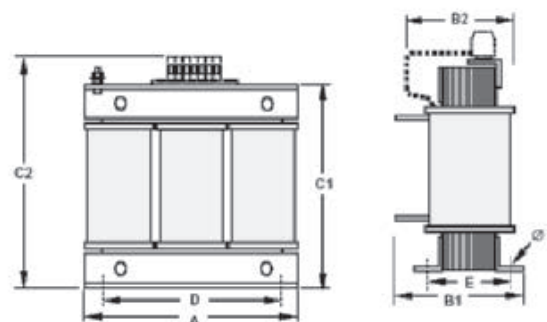
### Single-phase

| Voltage | Reference         | Dimensions |     |     |     |    |   |     |   | Weight kg |
|---------|-------------------|------------|-----|-----|-----|----|---|-----|---|-----------|
|         |                   | A          | B   | C   | D   | E  | F | G   | H |           |
| 200 V   | AX-RAI02000070-DE | 84         | 113 | 96  | 101 | 66 | 5 | 7.5 | 2 | 1.22      |
|         | AX-RAI01700140-DE | 84         | 113 | 116 | 101 | 66 | 5 | 7.5 | 2 | 1.95      |
|         | AX-RAI01200200-DE | 84         | 113 | 131 | 101 | 66 | 5 | 7.5 | 2 | 2.55      |
|         | AX-RAI00630240-DE | 84         | 113 | 116 | 101 | 66 | 5 | 7.5 | 2 | 1.95      |



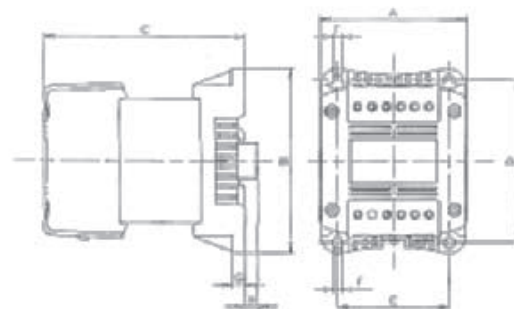
### Three-phase

| Voltage | Reference         | Dimensions |    |     |     |    |     | Weight kg |
|---------|-------------------|------------|----|-----|-----|----|-----|-----------|
|         |                   | A          | B2 | C2  | D   | E  | F   |           |
| 200 V   | AX-RAI02800080-DE | 120        | 70 | 120 | 80  | 52 | 5.5 | 1.78      |
|         | AX-RAI00880200-DE | 120        | 80 | 120 | 80  | 62 | 5.5 | 2.35      |
|         | AX-RAI00350335-DE | 180        | 85 | 190 | 140 | 55 | 6   | 5.5       |
|         | AX-RAI00180670-DE | 180        | 85 | 190 | 140 | 55 | 6   | 5.5       |
| 400 V   | AX-RAI07700050-DE | 120        | 70 | 120 | 80  | 52 | 5.5 | 1.78      |
|         | AX-RAI03500100-DE | 120        | 80 | 120 | 80  | 62 | 5.5 | 2.35      |
|         | AX-RAI01300170-DE | 120        | 80 | 120 | 80  | 62 | 5.5 | 2.50      |
|         | AX-RAI00740335-DE | 180        | 85 | 190 | 140 | 55 | 6   | 5.5       |



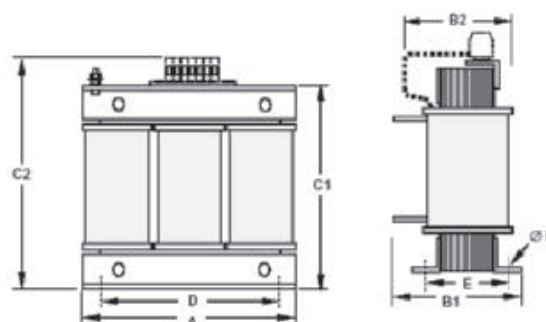
# DC Reactor

| Voltage          | Reference        | Dimensions |      |      |     |     |     |      |      | Weight<br>kg |
|------------------|------------------|------------|------|------|-----|-----|-----|------|------|--------------|
|                  |                  | A          | B    | C    | D   | E   | F   | G    | H    |              |
| 200 V            | AX-RC21400016-DE | 84         | 113  | 96   | 101 | 66  | 5   | 7.5  | 2    | 1.22         |
|                  | AX-RC10700032-DE |            |      | 105  |     |     |     |      |      | 1.60         |
|                  | AX-RC06750061-DE |            |      |      |     |     |     |      |      |              |
|                  | AX-RC03510093-DE |            |      |      |     |     |     |      |      |              |
|                  | AX-RC02510138-DE | 116        | 1.95 |      |     |     |     |      |      |              |
|                  | AX-RC01600223-DE | 108        | 135  | 124  | 120 | 82  | 6.5 | 9.5  | 9.5  | 3.20         |
|                  | AX-RC01110309-DE | 120        | 152  | 136  | 135 | 94  | 7   |      |      | 9.5          |
|                  | AX-RC00840437-DE |            |      | 146  |     |     |     | 6.00 |      |              |
|                  | AX-RC00590614-DE | 150        | 177  | 160  | 160 | 115 | 2   | -    | 11.4 |              |
| AX-RC00440859-DE | 182.6            |            |      | 14.3 |     |     |     |      |      |              |
| 400 V            | AX-RC43000020-DE | 84         | 113  | 96   | 101 | 66  | 5   | 7.5  | 2    | 1.22         |
|                  | AX-RC27000030-DE |            |      | 105  |     |     |     |      |      | 1.60         |
|                  | AX-RC14000047-DE |            |      |      |     |     |     |      |      |              |
|                  | AX-RC10100069-DE |            |      |      |     |     |     |      |      |              |
|                  | AX-RC06400116-DE | 108        | 135  | 133  | 120 | 82  | 6.5 | 9.5  | 9.5  | 3.70         |
|                  | AX-RC04410167-DE | 120        | 152  | 136  | 135 | 94  | 7   |      |      | 9.5          |
|                  | AX-RC03350219-DE |            |      | 146  |     |     |     | 6.00 |      |              |
|                  | AX-RC02330307-DE | 150        | 177  | 160  | 160 | 115 | 7   | 2    | -    | 11.4         |
|                  | AX-RC01750430-DE |            |      | 183  |     |     |     |      |      | 14.3         |



# Output AC Reactor

| Voltage | Reference         | Dimensions |     |     |     |    |     | Weight<br>kg |
|---------|-------------------|------------|-----|-----|-----|----|-----|--------------|
|         |                   | A          | B2  | C2  | D   | E  | F   |              |
| 200 V   | AX-RAO11500026-DE | 120        | 70  | 120 | 80  | 52 | 5.5 | 1.78         |
|         | AX-RAO07600042-DE | 120        | 70  | 120 | 80  | 52 | 5.5 | 1.78         |
|         | AX-RAO04100075-DE | 120        | 80  | 120 | 80  | 62 | 5.5 | 2.35         |
|         | AX-RAO03000105-DE | 120        | 80  | 120 | 80  | 62 | 5.5 | 2.35         |
|         | AX-RAO01830180-DE | 180        | 85  | 195 | 140 | 55 | 6   | 5.5          |
|         | AX-RAO01150220-DE | 180        | 85  | 195 | 140 | 55 | 6   | 5.5          |
|         | AX-RAO00950320-DE | 180        | 85  | 210 | 140 | 55 | 6   | 6.5          |
|         | AX-RAO00630430-DE | 180        | 95  | 210 | 140 | 65 | 6   | 9.1          |
| 400 V   | AX-RAO00490640-DE | 180        | 105 | 210 | 140 | 75 | 6   | 11.7         |
|         | AX-RAO16300038-DE | 120        | 80  | 120 | 80  | 62 | 5.5 | 2.35         |
|         | AX-RAO11800053-DE | 120        | 80  | 120 | 80  | 62 | 5.5 | 2.35         |
|         | AX-RAO07300080-DE | 180        | 95  | 195 | 140 | 55 | 6   | 5.5          |
|         | AX-RAO04600110-DE | 180        | 85  | 195 | 140 | 55 | 6   | 5.5          |
|         | AX-RAO03600160-DE | 180        | 85  | 210 | 140 | 55 | 6   | 6.5          |
|         | AX-RAO02500220-DE | 180        | 95  | 210 | 140 | 65 | 6   | 9.1          |
|         | AX-RAO02000320-DE | 240        | 110 | 275 | 200 | 75 | 6   | 16.0         |



Chokes

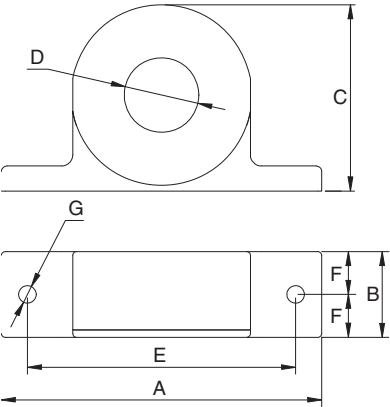


Figure 1

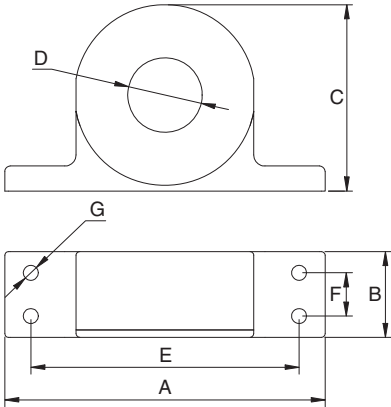


Figure 2

| Reference     | Fig | D<br>(diameter) | Motor (kW) | Dimensions (mm) |    |     |    |     |      |                 | Weight (kg) |
|---------------|-----|-----------------|------------|-----------------|----|-----|----|-----|------|-----------------|-------------|
|               |     |                 |            | A               | B  | C   | D  | E   | F    | G<br>(diameter) |             |
| AX-FER2102-PE | 1   | 21              | < 2.2      | 86              | 24 | 50  | 21 | 70  | 12   | 4               | 0.09        |
| AX-FER2815-PE |     | 28              | < 15       | 106             | 25 | 65  | 28 | 90  | 12.5 |                 | 0.22        |
| AX-FER5045-PE | 2   | 50              | < 45       | 150             | 51 | 112 | 50 | 125 | 30   | 5               | 0.53        |

# Resistor dimensions

AX-REM00K15xxx

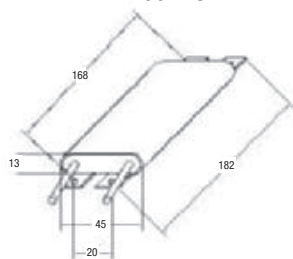


Fig 1

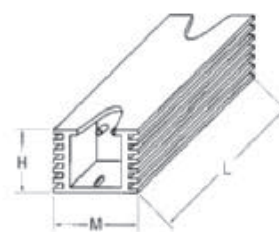


Fig 2

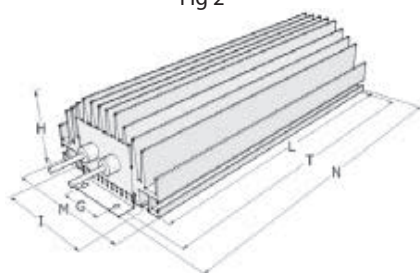


Fig 3

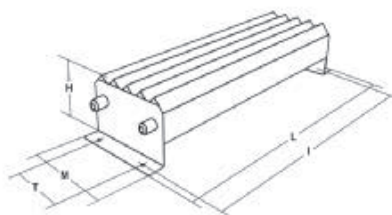
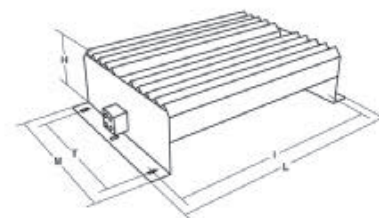
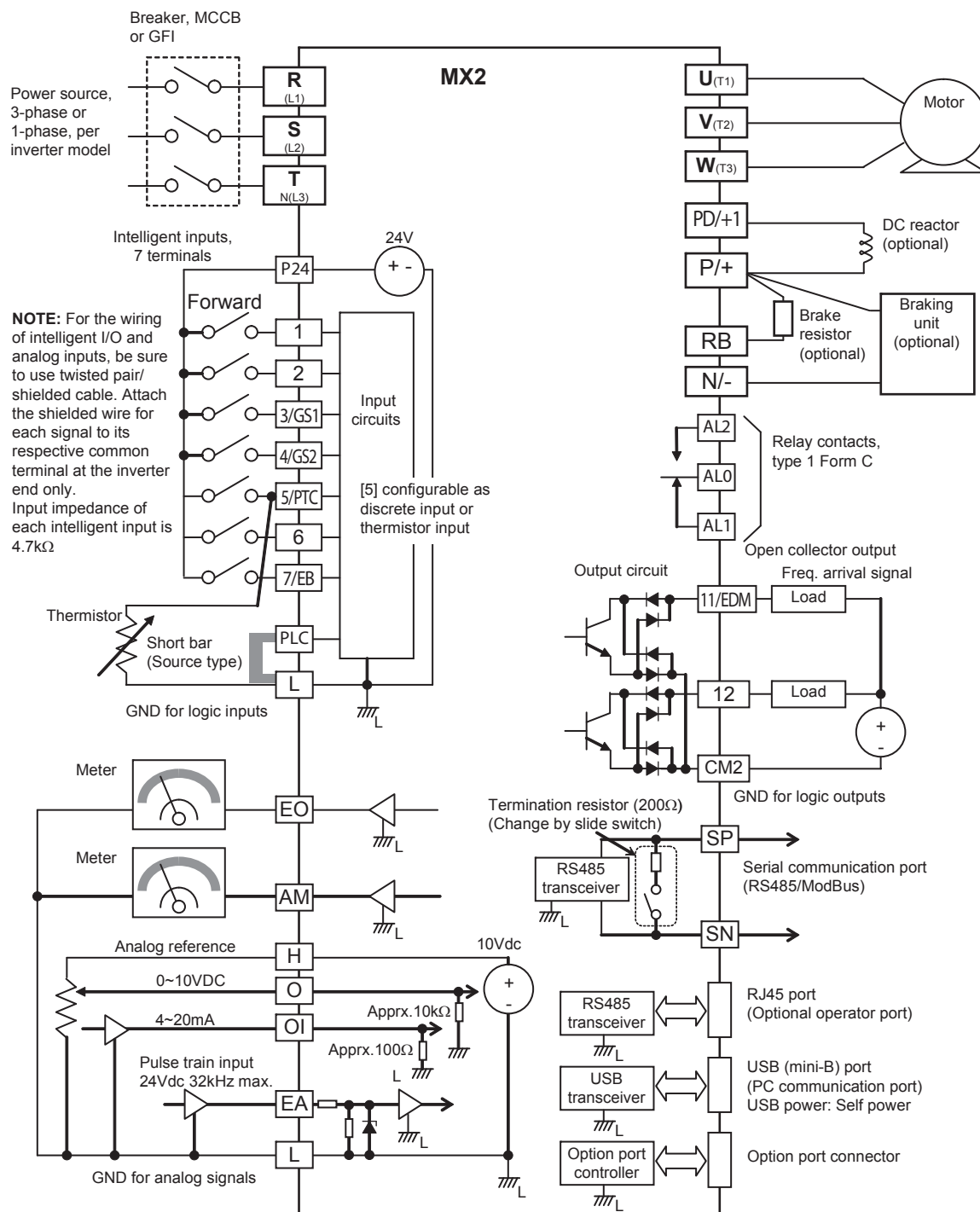


Fig 4



| Type             | Fig. | Dimensions |     |     |     |     |   |   | Weight |
|------------------|------|------------|-----|-----|-----|-----|---|---|--------|
|                  |      | L          | H   | M   | I   | T   | G | N | kg     |
| AX-REM00K1400-IE | 1    | 105        | 27  | 36  | 94  | -   | - | - | 0.2    |
| AX-REM00K2070-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K2120-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K2200-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K4075-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K4035-IE | 2    | 200        | 27  | 36  | 189 | -   | - | - | 0.425  |
| AX-REM00K4030-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K5120-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K6100-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K6035-IE |      |            |     |     |     |     |   |   |        |
| AX-REM00K9070-IE | 3    | 365        | 73  | 105 | 350 | 70  | - | - | 4      |
| AX-REM01K9070-IE |      |            |     |     |     |     |   |   |        |
| AX-REM01K9017-IE |      |            |     |     |     |     |   |   |        |
| AX-REM02K1070-IE | 4    | 310        | 100 | 240 | 295 | 210 | - | - | 7      |
| AX-REM02K1017-IE |      |            |     |     |     |     |   |   |        |
| AX-REM03K5035-IE |      |            |     |     |     |     |   |   |        |
| AX-REM03K5010-IE |      | 365        | 100 | 240 | 350 | 210 | - | - | 8      |

## Standard connections



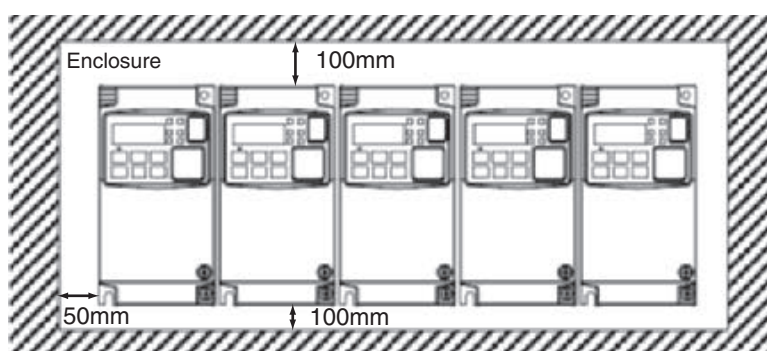
## Terminal Block Specifications

| Terminal         | Name                               | Function (signal level)                                                                                                                                                     |
|------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R/L1, S/L2, T/L3 | Main circuit power supply input    | Used to connect line power to the drive.<br>Drives with single-phase 200 V input power use only terminals R/L1 and N (T/L3), terminal S/L2 is not available for these units |
| U/T1, V/T2, W/T3 | Inverter output                    | Used to connect the motor                                                                                                                                                   |
| PD/+1, P/+       | External DC reactor terminal       | Normally connected by the short-circuit bar. Remove the short-circuit bar between +1 and P/+2 when a DC reactor is connected.                                               |
| P/+, N/-         | Regenerative braking unit terminal | Connect optional regenerative braking units (If a braking torque is required)                                                                                               |
| P/+, RB          | Braking resistor terminals         | Connect option braking resistor (if a braking torque is required)                                                                                                           |
| $\oplus$         | Grounding                          | For grounding (grounding should conform to the local grounding code.)                                                                                                       |

## Control Circuit

| Type                   | No.    | Signal name                                             | Function                                                                                                         | Signal level                                                                       |
|------------------------|--------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Digital input signals  | PLC    | Intelligent input common                                | Source type: connecting [P24] to [1]-[7] turns inputs ON<br>Sink type: connecting [L] to [1]-[7] turns inputs ON | -                                                                                  |
|                        | P24    | Internal 24 VDC                                         | 24 VDC, 30mA                                                                                                     | 24 VDC, 100 mA                                                                     |
|                        | 1      | Multi-function Input selection 1                        | Factory setting: Forward/ Stop                                                                                   | 27 VDC max                                                                         |
|                        | 2      | Multi-function Input selection 2                        | Factory setting: Reverse/ Stop                                                                                   |                                                                                    |
|                        | 3/GS1  | Multi-function Input selection 3 / safe stop input 1    | Factory setting: External trip                                                                                   |                                                                                    |
|                        | 4/GS2  | Multi-function Input selection 4 / safe stop input 2    | Factory setting: Reset                                                                                           |                                                                                    |
|                        | 5/PTC  | Multi-function Input selection 5 / PTC thermistor input | Factory setting: Multi-step speed reference 1                                                                    |                                                                                    |
|                        | 6      | Multi-function input selection 6                        | Factory setting: Multi-step speed reference 2                                                                    |                                                                                    |
|                        | 7/EB   | Multi-function input selection 7 / Pulse train input B  | Factory setting: Jog                                                                                             |                                                                                    |
|                        | L      | Multi-function Input selection common (in upper row)    | --                                                                                                               | --                                                                                 |
| Pulse train            | EA     | Pulse train input A                                     | Factory setting: Speed reference                                                                                 | 32 kHz max<br>5 to 24 VDC                                                          |
|                        | EO     | Pulse train output                                      | LAD frequency                                                                                                    | 10 VDC 2 mA<br>32 kHz max                                                          |
| Analog input signal    | H      | Frequency reference power supply                        | 10 VDC 10 mA max                                                                                                 |                                                                                    |
|                        | O      | Voltage frequency reference signal                      | 0 to 10 VDC (10 k $\Omega$ )                                                                                     |                                                                                    |
|                        | OI     | Current frequency reference signal                      | 4 to 20 mA (250 $\Omega$ )                                                                                       |                                                                                    |
|                        | L      | Frequency reference common (bottom row)                 | --                                                                                                               |                                                                                    |
| Digital output signals | 11/EDM | Discrete logic output 1 / EDM output                    | Factory setting: During Run                                                                                      | 27 VDC, 50 mA max<br>EDM based on<br>ISO13849-1                                    |
|                        | 12     | Discrete logic output 2                                 | Factory setting: Frequency arrival type 1                                                                        |                                                                                    |
|                        | CM2    | GND logic output                                        | --                                                                                                               |                                                                                    |
|                        | AL0    | Relay common contact                                    | Factory setting: Alarm signal                                                                                    | R load<br>250 VAC 2.5 A<br>30 VDC 3.0 A<br>I load<br>250 VAC 0.2 A<br>30 VDC 0.7 A |
|                        | AL1    | Relay contact, normally open                            | Under normal operation<br>AL1 - AL0 Closed                                                                       |                                                                                    |
|                        | AL2    | Relay contact, normally closed                          | AL2 - AL0 Open                                                                                                   |                                                                                    |
| Monitor Signal         | AM     | Analog voltage output                                   | Factory setting: LAD frequency                                                                                   | 0 to 10 VDC 1 mA                                                                   |
| Comms                  | SP     | Serial communication terminal                           | RS485 Modbus communication                                                                                       |                                                                                    |
|                        | SN     |                                                         |                                                                                                                  |                                                                                    |

## Side by side mounting



## Inverter heat loss

### Single-phase 200 V class

| Model 3G3MX2             |         | AB001        | AB002 | AB004 | AB007 | AB015              | AB022 |
|--------------------------|---------|--------------|-------|-------|-------|--------------------|-------|
| Inverter capacity<br>kVA | 200V VT | 0.4          | 0.6   | 1.2   | 2.0   | 3.3                | 4.1   |
|                          | 200V CT | 0.2          | 0.5   | 1.0   | 1.7   | 2.7                | 3.8   |
|                          | 240V VT | 0.4          | 0.7   | 1.4   | 2.4   | 3.9                | 4.9   |
|                          | 240V CT | 0.3          | 0.6   | 1.2   | 2.0   | 3.3                | 4.5   |
| Rated current (A) VT     |         | 1.2          | 1.9   | 3.4   | 6.0   | 9.6                | 12.0  |
| Rated current (A) CT     |         | 1.0          | 1.6   | 3.0   | 5.0   | 8.0                | 11.0  |
| Total heat loss          |         | 12           | 22    | 30    | 48    | 79                 | 104   |
| Efficiency at rated load |         | 89.5         | 90    | 93    | 94    | 95                 | 95.5  |
| Cooling Method           |         | Self cooling |       |       |       | Forced-air-cooling |       |

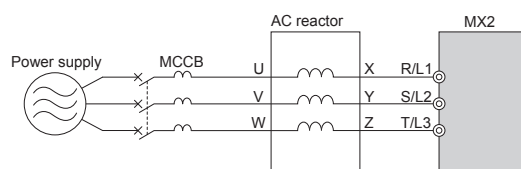
## Three-phase 200 V class

| Model 3G3MX2             |        | A2001        | A2002 | A2004 | A2007 | A2015 | A2022              | A2037 | A2055 | A2075 | A2110 | A2150 |
|--------------------------|--------|--------------|-------|-------|-------|-------|--------------------|-------|-------|-------|-------|-------|
| Inverter capacity kVA    | 200 VT | 0.4          | 0.6   | 1.2   | 2.0   | 3.3   | 4.1                | 6.7   | 10.3  | 13.8  | 19.3  | 23.9  |
|                          | 200 CT | 0.2          | 0.5   | 1.0   | 1.7   | 2.7   | 3.8                | 6.0   | 8.6   | 11.4  | 16.2  | 20.7  |
|                          | 240 VT | 0.4          | 0.7   | 1.4   | 2.4   | 3.9   | 4.9                | 8.1   | 12.4  | 16.6  | 23.2  | 28.6  |
|                          | 240 CT | 0.3          | 0.6   | 1.2   | 2.0   | 3.3   | 4.5                | 7.2   | 10.3  | 13.7  | 19.5  | 24.9  |
| Rated current (A) VT     |        | 1.2          | 1.9   | 3.4   | 6.0   | 9.6   | 12.0               | 19.6  | 30.0  | 40.0  | 56.0  | 69.0  |
| Rated current (A) CT     |        | 1.0          | 1.6   | 3.0   | 5.0   | 8.0   | 11.0               | 17.5  | 25.0  | 33.0  | 47.0  | 60.0  |
| Total heat loss          |        | 12           | 22    | 30    | 48    | 79    | 104                | 154   | 229   | 313   | 458   | 625   |
| Efficiency at rated load |        | 89.5         | 90    | 93    | 94    | 95    | 95.5               | 96    | 96    | 96    | 96    | 96    |
| Cooling Method           |        | Self cooling |       |       |       |       | Forced-air-cooling |       |       |       |       |       |

## Three-phase 400 V class

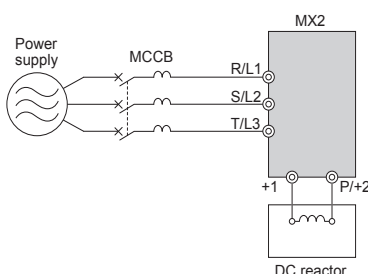
| Model 3G3MX2             |         | A4004        | A4007 | A4015 | A4022              | A4030 | A4040 | A4055 | A4075 | A4110 | A4150 |
|--------------------------|---------|--------------|-------|-------|--------------------|-------|-------|-------|-------|-------|-------|
| Inverter capacity<br>kVA | 380V VT | 1.3          | 2.6   | 3.5   | 4.5                | 5.7   | 7.3   | 11.5  | 15.1  | 20.4  | 25.0  |
|                          | 380V CT | 1.1          | 2.2   | 3.1   | 3.6                | 4.7   | 6.0   | 9.7   | 11.8  | 15.7  | 20.4  |
|                          | 480V VT | 1.7          | 3.4   | 4.4   | 5.7                | 7.3   | 9.2   | 14.5  | 19.1  | 25.7  | 31.5  |
|                          | 480V CT | 1.4          | 2.8   | 3.9   | 4.5                | 5.9   | 7.6   | 12.3  | 14.9  | 19.9  | 25.7  |
| Rated current (A) VT     |         | 2.1          | 4.1   | 5.4   | 6.9                | 8.8   | 11.1  | 17.5  | 23.0  | 31.0  | 38.0  |
| Rated current (A) CT     |         | 1.8          | 3.4   | 4.8   | 5.5                | 7.2   | 9.2   | 14.8  | 18.0  | 24.0  | 31.0  |
| Total heat loss          |         | 35           | 56    | 96    | 116                | 125   | 167   | 229   | 296   | 411   | 528   |
| Efficiency at rated load |         | 92           | 93    | 94    | 95                 | 96    | 96    | 96    | 96.2  | 96.4  | 96.6  |
| Cooling Method           |         | Self cooling |       |       | Forced-air-cooling |       |       |       |       |       |       |

## Input AC Reactor



| 1 phase 200 V class             |                   |                 |               | 3 phase 200 V class             |                   |                 |               | 400 V class                     |                   |                 |               |
|---------------------------------|-------------------|-----------------|---------------|---------------------------------|-------------------|-----------------|---------------|---------------------------------|-------------------|-----------------|---------------|
| Max. applicable motor output kW | Reference         | Current value A | Inductance mH | Max. applicable motor output kW | Reference         | Current value A | Inductance mH | Max. applicable motor output kW | Reference         | Current value A | Inductance mH |
| 0.4                             | AX-RAI02000070-DE | 7.0             | 2.0           | 1.5                             | AX-RAI02800080-DE | 8.0             | 2.8           | 1.5                             | AX-RAI07700050-DE | 5.0             | 7.7           |
| 0.75                            | AX-RAI01700140-DE | 14.0            | 1.7           | 3.7                             | AX-RAI00880200-DE | 20.0            | 0.88          | 4.0                             | AX-RAI03500100-DE | 10.0            | 3.5           |
| 1.5                             | AX-RAI01200200-DE | 20.0            | 1.2           | 7.5                             | AX-RAI00350335-DE | 33.5            | 0.35          | 7.5                             | AX-RAI01300170-DE | 17.0            | 1.3           |
| 2.2                             | AX-RAI00630240-DE | 24.0            | 0.63          | 15                              | AX-RAI00180670-DE | 67.0            | 0.18          | 15                              | AX-RAI00740335-DE | 33.5            | 0.74          |

## DC Reactor

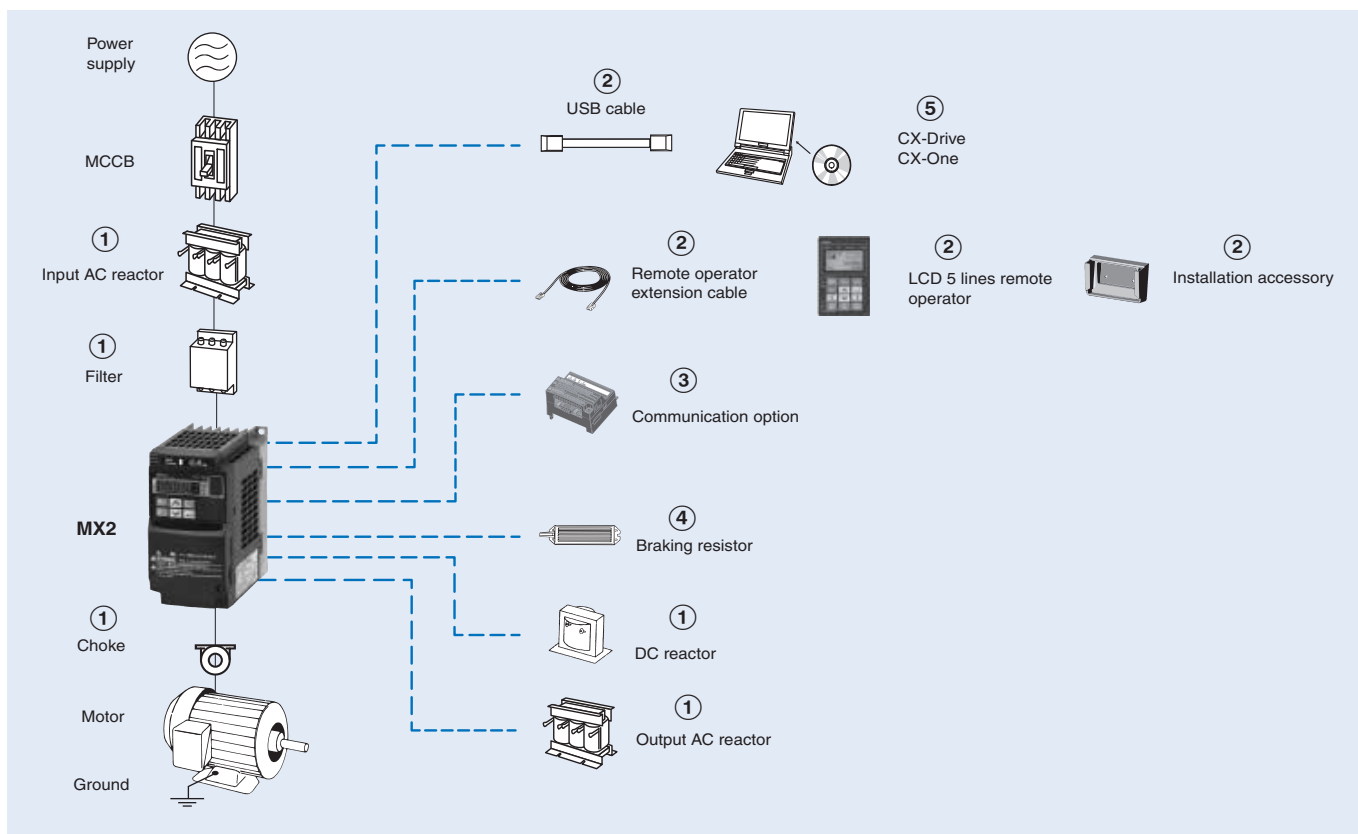


| 200 V class                     |                  |                 |               | 400 V class                     |                  |                 |               |
|---------------------------------|------------------|-----------------|---------------|---------------------------------|------------------|-----------------|---------------|
| Max. applicable motor output kW | Reference        | Current value A | Inductance mH | Max. applicable motor output kW | Reference        | Current value A | Inductance mH |
| 0.2                             | AX-RC21400016-DE | 1.6             | 21.4          | 0.4                             | AX-RC43000020-DE | 2.0             | 43.0          |
| 0.4                             | AX-RC10700032-DE | 3.2             | 10.7          | 0.7                             | AX-RC27000030-DE | 3.0             | 27.0          |
| 0.7                             | AX-RC06750061-DE | 6.1             | 6.75          | 1.5                             | AX-RC14000047-DE | 4.7             | 14.0          |
| 1.5                             | AX-RC03510093-DE | 9.3             | 3.51          | 2.2                             | AX-RC10100069-DE | 6.9             | 10.1          |
| 2.2                             | AX-RC02510138-DE | 13.8            | 2.51          | 3.0 to 4.0                      | AX-RC06400116-DE | 11.6            | 6.40          |
| 3.7                             | AX-RC01600223-DE | 22.3            | 1.60          | 5.5                             | AX-RC04410167-DE | 16.7            | 4.41          |
| 5.5                             | AX-RC01110309-DE | 30.9            | 1.11          | 7.5                             | AX-RC03350219-DE | 21.9            | 3.35          |
| 7.5                             | AX-RC00840437-DE | 43.7            | 0.84          | 11.0                            | AX-RC02330307-DE | 30.7            | 2.33          |
| 11.0                            | AX-RC00590614-DE | 61.4            | 0.59          | 15.0                            | AX-RC01750430-DE | 43.0            | 1.75          |
| 15.0                            | AX-RC00440859-DE | 85.9            | 0.44          |                                 | -                |                 |               |

## Output AC Reactor

| 200 V class                     |                   |                 |               | 400 V class                     |                   |                 |               |
|---------------------------------|-------------------|-----------------|---------------|---------------------------------|-------------------|-----------------|---------------|
| Max. applicable motor output kW | Reference         | Current value A | Inductance mH | Max. applicable motor output kW | Reference         | Current value A | Inductance mH |
| 0.4                             | AX-RAO11500026-DE | 2.6             | 11.50         | 1.5                             | AX-RAO16300038-DE | 3.8             | 16.30         |
| 0.75                            | AX-RAO07600042-DE | 4.2             | 7.60          |                                 |                   |                 |               |
| 1.5                             | AX-RAO04100075-DE | 7.5             | 4.10          |                                 |                   |                 |               |
| 2.2                             | AX-RAO03000105-DE | 10.5            | 3.00          | 2.2                             | AX-RAO11800053-DE | 5.3             | 11.80         |
| 3.7                             | AX-RAO01830160-DE | 16.0            | 1.83          | 4.0                             | AX-RAO07300080-DE | 8.0             | 7.30          |
| 5.5                             | AX-RAO01150220-DE | 22.0            | 1.15          | 5.5                             | AX-RAO04600110-DE | 11.0            | 4.60          |
| 7.5                             | AX-RAO00950320-DE | 32.0            | 0.95          | 7.5                             | AX-RAO03600160-DE | 16.0            | 3.60          |
| 11                              | AX-RAO00630430-DE | 43.0            | 0.63          | 11                              | AX-RAO02500220-DE | 22.0            | 2.50          |
| 15                              | AX-RAO00490640-DE | 64.0            | 0.49          | 15                              | AX-RAO02000320-DE | 32.0            | 2.00          |

## Ordering information



### 3G3MX2

| Specifications        |                 |                 |                 |                 | Model          |                  |
|-----------------------|-----------------|-----------------|-----------------|-----------------|----------------|------------------|
| Voltage class         | Constant torque |                 | Variable torque |                 | Standard       | Finless          |
|                       | Max motor kW    | Rated current A | Max motor kW    | Rated current A |                |                  |
| Single-phase<br>200 V | 0.1             | 1.0             | 0.2             | 1.2             | 3G3MX2-AB001-E | 3G3MX2-AB001-P-E |
|                       | 0.2             | 1.6             | 0.4             | 1.9             | 3G3MX2-AB002-E | 3G3MX2-AB002-P-E |
|                       | 0.4             | 3.0             | 0.55            | 3.5             | 3G3MX2-AB004-E | 3G3MX2-AB004-P-E |
|                       | 0.75            | 5.0             | 1.1             | 6.0             | 3G3MX2-AB007-E | 3G3MX2-AB007-P-E |
|                       | 1.5             | 8.0             | 2.2             | 9.6             | 3G3MX2-AB015-E | 3G3MX2-AB015-P-E |
|                       | 2.2             | 11.0            | 3.0             | 12.0            | 3G3MX2-AB022-E | 3G3MX2-AB022-P-E |
| Three-phase<br>200 V  | 0.1             | 1.0             | 0.2             | 1.2             | 3G3MX2-A2001-E | 3G3MX2-A2001-P-E |
|                       | 0.2             | 1.6             | 0.4             | 1.9             | 3G3MX2-A2002-E | 3G3MX2-A2002-P-E |
|                       | 0.4             | 3.0             | 0.55            | 3.5             | 3G3MX2-A2004-E | 3G3MX2-A2004-P-E |
|                       | 0.75            | 5.0             | 1.1             | 6.0             | 3G3MX2-A2007-E | 3G3MX2-A2007-P-E |
|                       | 1.5             | 8.0             | 2.2             | 9.6             | 3G3MX2-A2015-E | 3G3MX2-A2015-P-E |
|                       | 2.2             | 11.0            | 3.0             | 12.0            | 3G3MX2-A2022-E | 3G3MX2-A2022-P-E |
|                       | 3.7             | 17.5            | 5.5             | 19.6            | 3G3MX2-A2037-E | 3G3MX2-A2037-P-E |
|                       | 5.5             | 25.0            | 7.5             | 30.0            | 3G3MX2-A2055-E | -                |
|                       | 7.5             | 33.0            | 11              | 40.0            | 3G3MX2-A2075-E | -                |
|                       | 11              | 47.0            | 15              | 56.0            | 3G3MX2-A2110-E | -                |
| Three-phase<br>400 V  | 0.4             | 1.8             | 0.75            | 2.1             | 3G3MX2-A4004-E | 3G3MX2-A4004-P-E |
|                       | 0.75            | 3.4             | 1.5             | 4.1             | 3G3MX2-A4007-E | 3G3MX2-A4007-P-E |
|                       | 1.5             | 4.8             | 2.2             | 5.4             | 3G3MX2-A4015-E | 3G3MX2-A4015-P-E |
|                       | 2.2             | 5.5             | 3.0             | 6.9             | 3G3MX2-A4022-E | 3G3MX2-A4022-P-E |
|                       | 3.0             | 7.2             | 4.0             | 8.8             | 3G3MX2-A4030-E | 3G3MX2-A4030-P-E |
|                       | 4.0             | 9.2             | 5.5             | 11.1            | 3G3MX2-A4040-E | 3G3MX2-A4040-P-E |
|                       | 5.5             | 14.8            | 7.5             | 17.5            | 3G3MX2-A4055-E | -                |
|                       | 7.5             | 18.0            | 11              | 23.0            | 3G3MX2-A4075-E | -                |
|                       | 11              | 24.0            | 15              | 31.0            | 3G3MX2-A4110-E | -                |
|                       | 15              | 31.0            | 18.5            | 38.0            | 3G3MX2-A4150-E | -                |

## ① Line filters

| Inverter          |                               | Standard line filter |             |                  |             | Low leakage line filter |             |                  |             |
|-------------------|-------------------------------|----------------------|-------------|------------------|-------------|-------------------------|-------------|------------------|-------------|
|                   |                               | Rasmi                |             | Schaffner        |             | Rasmi                   |             | Schaffner        |             |
| Voltage           | Model 3G3MX2-□                | Reference AX-FIM     | Current (A) | Reference AX-FIM | Current (A) | Reference AX-FIM        | Current (A) | Reference AX-FIM | Current (A) |
| 1Phase<br>200 VAC | AB001 / AB002 / AB004         | 1010-RE              | 10          | 1010-SE-V1       | 8           | 1010-RE-LL              | 10          | 1010-SE-LL       | 10          |
|                   | AB007                         | 1014-RE              | 14          | 1014-SE-V1       | 14          | 1014-RE-LL              | 14          | 1014-SE-LL       | 14          |
|                   | AB015 / AB022                 | 1024-RE              | 24          | 1024-SE-V1       | 27          | 1024-RE-LL              | 24          | 1024-SE-LL       | 24          |
| 3Phase<br>200 VAC | A2001 / A2002 / A2004 / A2007 | 2010-RE              | 10          | 2010-SE-V1       | 7.8         | 2010-RE-LL              | 10          | -                | -           |
|                   | A2015 / A2022                 | 2020-RE              | 20          | 2020-SE-V1       | 16          | 2020-RE-LL              | 20          | 2020-SE-LL       | 20          |
|                   | A2037                         | 2030-RE              | 30          | 2030-SE-V1       | 25          | 2030-RE-LL              | 30          | 2030-SE-LL       | 30          |
|                   | A2055 / A2075                 | 2060-RE              | 60          | 2060-SE-V1       | 50          | 2060-RE-LL              | 60          | 2060-SE-LL       | 50          |
|                   | A2110                         | 2080-RE              | 80          | 2080-SE-V1       | 70          | 2080-RE-LL              | 80          | -                | -           |
|                   | A2150                         | 2100-RE              | 100         | 2100-SE-V1       | 75          | 2100-RE-LL              | 100         | -                | -           |
| 3Phase<br>400 VAC | A4004 / A4007                 | 3005-RE              | 5           | 3005-SE-V1       | 6           | 3005-RE-LL              | 5           | 3005-SE-LL       | 5           |
|                   | A4015 / A4022 / A4030         | 3010-RE              | 10          | 3010-SE-V1       | 12          | 3010-RE-LL              | 10          | 3010-SE-LL       | 10          |
|                   | A4040                         | 3014-RE              | 14          | 3014-SE-V1       | 15          | 3014-RE-LL              | 14          | 3014-SE-LL       | 15          |
|                   | A4055 / A4075                 | 3030-RE              | 30          | 3030-SE-V1       | 29          | 3030-RE-LL              | 30          | 3030-SE-LL       | 30          |
|                   | A4110 / A4150                 | 3050-RE              | 50          | 3050-SE-V1       | 48          | 3050-RE-LL              | 50          | 3050-SE-LL       | 50          |

## ① Input AC reactors

| Inverter        |                       | AC Reactor        |
|-----------------|-----------------------|-------------------|
| Voltage         | Model 3G3MX2-□        | Reference         |
| 1-Phase 200 VAC | AB002 / AB004         | AX-RAI02000070-DE |
|                 | AB007                 | AX-RAI01700140-DE |
|                 | AB015                 | AX-RAI01200200-DE |
|                 | AB022                 | AX-RAI00630240-DE |
| 3-Phase 200 VAC | A2002 / A2004 / A2007 | AX-RAI02800080-DE |
|                 | A2015 / A2022 / A2037 | AX-RAI00880200-DE |
|                 | A2055 / A2075         | AX-RAI00350335-DE |
|                 | A2110 / A2150         | AX-RAI00180670-DE |
| 3-Phase 400 VAC | A4004 / A4007 / A4015 | AX-RAI07700050-DE |
|                 | A4022 / A4030 / A4040 | AX-RAI03500100-DE |
|                 | A4055 / A4075         | AX-RAI01300170-DE |
|                 | A4110 / A4150         | AX-RAI00740335-DE |

## ① DC reactors

| 200V 1-phase |                  | 200V 3-phase |                  | 400V 3-phase         |                  |
|--------------|------------------|--------------|------------------|----------------------|------------------|
| Inverter     | DC Reactor       | Inverter     | DC Reactor       | Inverter             | DC Reactor       |
| 3G3MX2-AB001 | AX-RC10700032-DE | 3G3MX2-A2001 | AX-RC21400016-DE | 3G3MX2-A4004         | AX-RC43000020-DE |
| 3G3MX2-AB002 |                  | 3G3MX2-A2002 |                  | 3G3MX2-A4007         | AX-RC27000030-DE |
| 3G3MX2-AB004 | AX-RC06750061-DE | 3G3MX2-A2004 | AX-RC10700032-DE | 3G3MX2-A4015         | AX-RC14000047-DE |
| 3G3MX2-AB007 | AX-RC03510093-DE | 3G3MX2-A2007 | AX-RC06750061-DE | 3G3MX2-A4022         | AX-RC10100069-DE |
| 3G3MX2-AB015 | AX-RC02510138-DE | 3G3MX2-A2015 | AX-RC03510093-DE | 3G3MX2-A4030 / A4040 | AX-RC06400116-DE |
| 3G3MX2-AB022 | AX-RC01600223-DE | 3G3MX2-A2022 | AX-RC02510138-DE | 3G3MX2-A4055         | AX-RC04410167-DE |
| -            |                  | 3G3MX2-A2037 | AX-RC01600223-DE | 3G3MX2-A4075         | AX-RC03350219-DE |
|              |                  | 3G3MX2-A2055 | AX-RC01110309-DE | 3G3MX2-A4110         | AX-RC02330307-DE |
|              |                  | 3G3MX2-A2075 | AX-RC00840437-DE | 3G3MX2-A4150         | AX-RC01750430-DE |
|              |                  | 3G3MX2-A2110 | AX-RC00590614-DE | -                    |                  |
|              |                  | 3G3MX2-A2150 | AX-RC00440859-DE |                      |                  |

### ① Chokes

| Model         | Diameter | Description                |
|---------------|----------|----------------------------|
| AX-FER2102-PE | 21       | For 2.2 KW motors or below |
| AX-FER2815-PE | 28       | For 15 KW motors or below  |
| AX-FER5045-PE | 50       | For 45 KW motors or below  |

### ① Output AC reactor

| Inverter |                                                | AC Reactor        |
|----------|------------------------------------------------|-------------------|
| Voltage  | Model 3G3MX2-□                                 | Reference         |
| 200 VAC  | AB001 / AB002 / AB004<br>A2001 / A2002 / A2004 | AX-RAO11500026-DE |
|          | AB007 / A2007                                  | AX-RAO07600042-DE |
|          | AB015 / A2015                                  | AX-RAO04100075-DE |
|          | AB022 / A2022                                  | AX-RAO03000105-DE |
|          | A2037                                          | AX-RAO01830160-DE |
|          | A2055                                          | AX-RAO01150220-DE |
|          | A2075                                          | AX-RAO00950320-DE |
|          | A2110                                          | AX-RAO00630430-DE |
| 400 VAC  | A2150                                          | AX-RAO00490640-DE |
|          | A4004 / A4007 / A4015                          | AX-RAO16300038-DE |
|          | A4022                                          | AX-RAO11800053-DE |
|          | A4030 / A4040                                  | AX-RAO07300080-DE |
|          | A4055                                          | AX-RAO04600110-DE |
|          | A4075                                          | AX-RAO03600160-DE |
|          | A4110                                          | AX-RAO02500220-DE |
|          | A4150                                          | AX-RAO02000320-DE |

### ② Accessories

| Types            | Model             | Description                   | Functions                                                            |
|------------------|-------------------|-------------------------------|----------------------------------------------------------------------|
| Digital operator | AX-OP05-E         | LCD remote operator           | 5 Line LCD remote operator with copy function, cable length max. 3m. |
|                  | 3G3AX-CAJOP300-EE | Remote operator cable         | 3 meters cable for connecting remote operator                        |
|                  | 3G3AX-OP01        | LED remote operator           | LED remote operator, cable length max. 3m                            |
|                  | 4X-KITMINI        | Mounting kit for LED operator | Mounting kit for LED operator on panel                               |
|                  | 3G3AX-OP05-H-E    | Operator holder               | Holder to put the AX-OP05-E inside of the cabinet                    |
| Accessories      | AX-CUSBM002-E     | PC configuration cable        | Mini USB to USB connector cable                                      |

### ③ Communication option boards

| Types                 | Model             | Description                     | Functions                                                                                                                                                                                        |
|-----------------------|-------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication options | 3G3AX-MX2-PRT     | Profibus option card            | Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through communications with the host controller. |
|                       | 3G3AX-MX2-DRT     | DeviceNet option card           |                                                                                                                                                                                                  |
|                       | 3G3AX-MX2-ECT     | EtherCAT option card            |                                                                                                                                                                                                  |
|                       | 3G3AX-MX2-CRT     | CompoNet option card            |                                                                                                                                                                                                  |
|                       | 3G3AX-MX2-MRT     | MECHATROLINK-II option card     |                                                                                                                                                                                                  |
|                       | 3G3AX-MX2-EIP     | EtherNet/IP option card         |                                                                                                                                                                                                  |
| I/O option            | 3G3AX-MX2-EIO15-E | Extra input/output option board | 1 analog voltage input, 1 analog current input, 1 analog voltage output, 8 discrete logic inputs, 4 discrete logic outputs                                                                       |

## ④ Braking unit, braking resistor unit

| Inverter                       |               |                  |         | Braking resistor unit         |                                           |          |                  |                                           |          |                  |
|--------------------------------|---------------|------------------|---------|-------------------------------|-------------------------------------------|----------|------------------|-------------------------------------------|----------|------------------|
| Voltage                        | Max. motor kW | Inverter 3G3MX2□ |         | Connectable min. resistance Ω | Inverter mounted type (3 %ED, 10 sec max) |          | Braking torque % | Inverter mounted type (10%ED, 10 sec max) |          | Braking torque % |
|                                |               | 1-phase          | 3-phase |                               | Type AX-                                  | Resist Ω |                  | Type AX-                                  | Resist Ω |                  |
| 200 V<br>(Single-/Three-phase) | 0.12          | B001             | 2001    | 100                           | REM00K1400-IE                             | 400      | 200              | REM00K1400-IE                             | 400      | 200              |
|                                | 0.25          | B002             | 2002    |                               |                                           |          | 180              |                                           |          | 180              |
|                                | 0.55          | B004             | 2004    |                               | REM00K1200-IE                             | 200      | 180              | REM00K1200-IE                             | 200      | 180              |
|                                | 1.1           | B007             | 2007    | 100                           |                                           |          | REM00K2070-IE    | 70                                        | 200      |                  |
|                                | 1.5           | B015             | 2015    | REM00K2070-IE                 | 70                                        | 140      | REM00K4075-IE    | 75                                        | 130      |                  |
|                                | 2.2           | B022             | 2022    |                               |                                           | 90       | REM00K4035-IE    | 35                                        | 180      |                  |
|                                | 4.0           | —                | 2040    | 35                            | REM00K4075-IE                             | 75       | 50               | REM00K6035-IE                             | 35       | 100              |
|                                | 5.5           | —                | 2055    | 20                            | REM00K4035-IE                             | 35       | 75               | REM00K9020-IE                             | 20       | 150              |
|                                | 7.5           | —                | 2075    | 17                            |                                           |          | 55               | REM01K9017-IE                             | 17       | 110              |
|                                | 11            | —                | 2110    | 17                            | REM00K6035-IE                             | 35       | 40               | REM02K1017-IE                             | 17       | 75               |
| 15                             | —             | 2150             | 10      | REM00K9017-IE                 | 17                                        | 55       | REM03K5010-IE    | 10                                        | 95       |                  |
| 400 V<br>(Three-phase)         | 0.55          | —                | 4004    | 180                           | REM00K1400-IE                             | 400      | 200              | REM00K1400-IE                             | 400      | 200              |
|                                | 1.1           | —                | 4007    |                               |                                           |          | 200              |                                           |          | 200              |
|                                | 1.5           | —                | 4015    |                               | REM00K1200-IE                             | 200      | 190              | REM00K2200-IE                             | 200      | 190              |
|                                | 2.2           | —                | 4022    | 100                           | REM00K2200-IE                             | 200      | 130              | REM00K5120-IE                             | 120      | 200              |
|                                | 3.0           | —                | 4030    |                               | REM00K2120-IE                             | 120      | 160              |                                           |          | 160              |
|                                | 4.0           | —                | 4040    |                               |                                           |          | 120              | REM00K6100-IE                             | 100      | 140              |
|                                | 5.5           | —                | 4055    | 70                            | REM00K4075-IE                             | 75       | 140              | REM00K9070-IE                             | 70       | 150              |
|                                | 7.5           | —                | 4075    |                               |                                           |          | 100              | REM01K9070-IE                             | 70       | 110              |
|                                | 11            | —                | 4110    |                               | REM00K6100-IE                             | 100      | 50               | REM02K1070-IE                             | 70       | 75               |
|                                | 15            | —                | 4150    | 35                            | REM00K9070-IE                             | 70       | 55               | REM03K5035-IE                             | 35       | 110              |

## ⑤ Computer software

| Types    | Model    | Description       | Installation                                |
|----------|----------|-------------------|---------------------------------------------|
| Software | CX-Drive | Computer software | Configuration and monitoring software tool  |
|          | CX-One   | Computer software | Configuration and monitoring software tool  |
|          | €Saver   | Computer software | Software tool for Energy Saving calculation |

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.