

OMRON

RX INVERTER

Customised to your machine



- » High motor-control performance
- » Built-in know-how functionality
- » Uncompromising Omron quality

realizing

High performance to match your application

Omron realises that you need quality and reliability, plus the ability to easily and quickly customise your inverter to the application in hand. And with the RX, you have the perfect tool for the job.

Naturally it combines the same high level of quality and performance for which Omron is renowned. It also has abundant application functionality on board and you can customise it yourself to match your precise requirements.

Key features include:

- Up to 132 kW
- Built-in EMC filter
- Sensor-less and vector closed-loop control
- High starting torque in open loop (200% at 0.3 Hz)
- Double rating VT 120%/1 min and CT 150%/1 min
- Full torque at 0 Hz in closed loop
- Drive Programming
- Built-in application functionality
- Micro-surge voltage suppression
- Fieldbus communications: Modbus, DeviceNet, Profibus, Componet, EtherCAT & ML-II

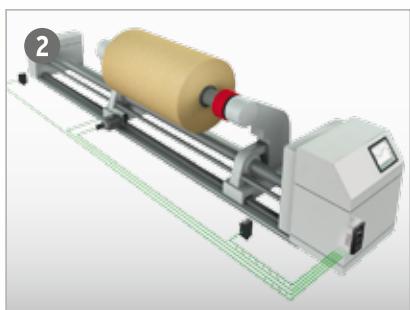




Free to program

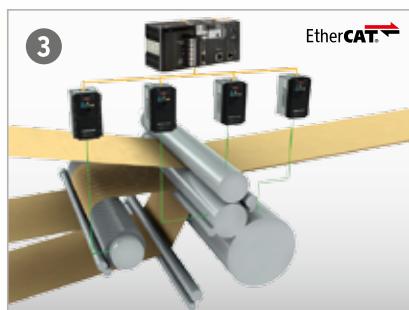
Drive Programming enables you to make your own programs to suit your machine, e.g. for an unwinding application. Up to 1000 lines of code and 5 tasks running in parallel in 2 programming modes:

- Intuitive Flow Chart programming
- Text Editor programming, including code completion and user defined aliases



Positioning functionality

Simple positioning is handled by the inverter itself without the need for an external motion controller. Functions include pulse trace position control mode, homing and position teaching.



Network Integration

Built-in RS485 Modbus communications and the possibility for integration in standard industrial networks, such as DeviceNet, Profibus, CompoNet or EtherCAT makes the RX suitable for machine integration.

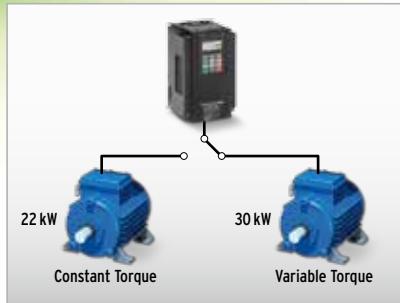
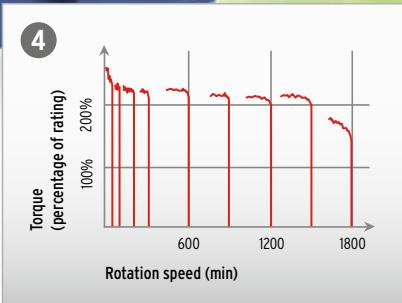
**From high torque to
high motor efficiency...**





Reliability with environmental responsibility

Omron is renowned for the reliability of its products. Moreover, Omron's policy is to offer environmentally safe products free from any banned substances.



Sensor-less vector control at 0 Hz domain

With the benefit of patented 0 Hz domain open-loop control mode, the RX can develop 150% torque at 0 Hz allowing zero speed load holding. Moreover, an improved sensor-less vector control algorithm enables the RX to develop more than 200% starting torque at 0.3 Hz.

Motor efficiency

RX is able to increase the output current by around 20% when moving from Constant Torque to Variable Torque control. By doing that RX can drive one frame size bigger motor. Variable torque benefit is higher energy saving at pumps and fans applications.

Long life design

RX has been designed with high quality components to guarantee a long operation life and minimise downtime. It includes a versatile maintenance function that warns the user in the event of DC bus capacitor temperature rise or cooling speed reduction.

RX

Customised to your machine

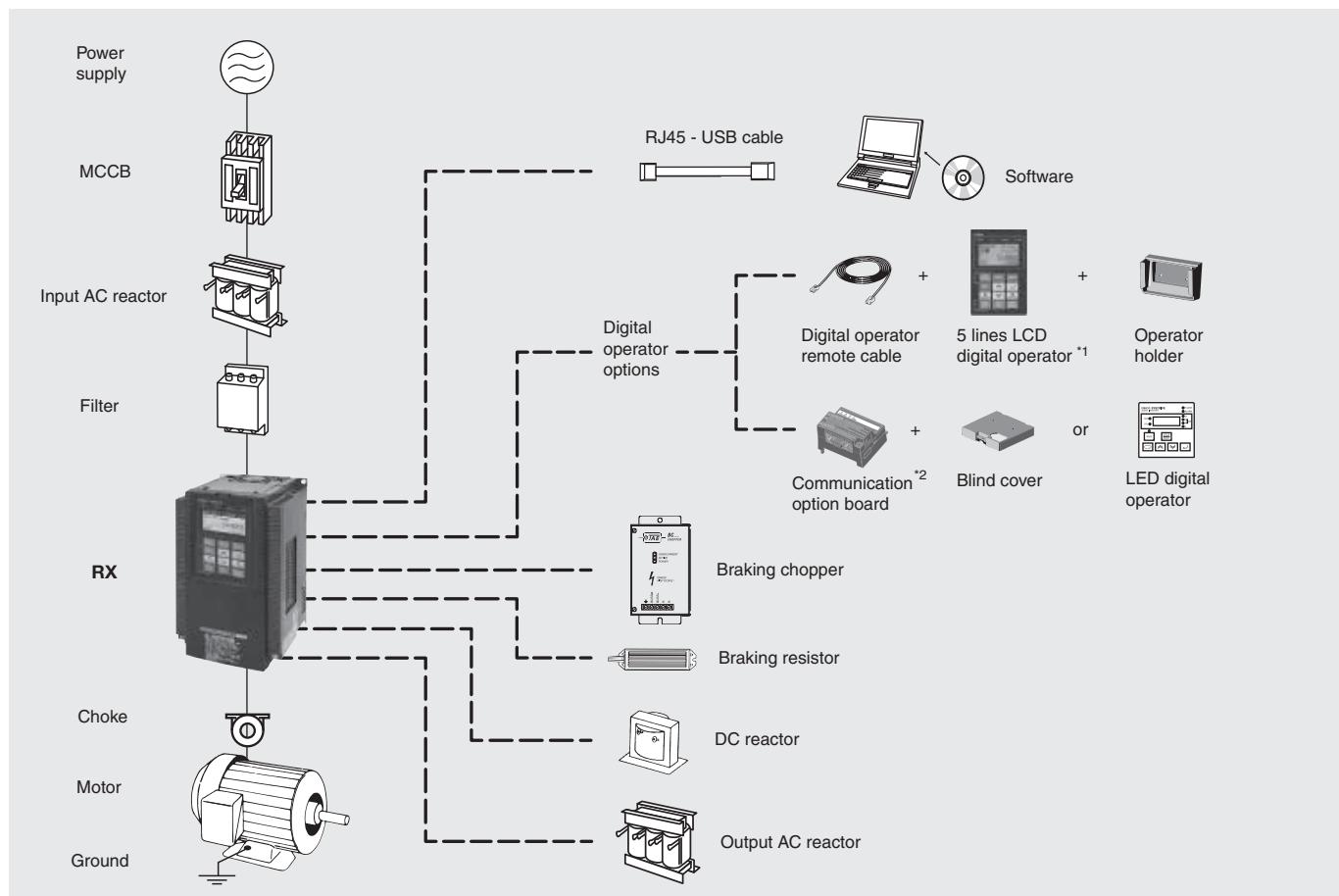
- Up to 132 kW
- High starting torque in open loop: 200% at 0.3Hz
- Full torque at 0 Hz in closed loop
- Sensor-less and vector closed-loop control
- Double rating VT 120%/1 min and CT 150%/1 min
- Built-in EMC filter
- Built-in logic programmability
- Built-in application functionality
- Positioning functionality
- Automatic energy saving
- Micro-surge voltage suppression
- Modbus RS485 (options for other networks)
- CE, cULus, RoHS

Ratings

- 200 V Class three-phase 0.4 to 55 kW
- 400 V Class three-phase 0.4 to 132 kW



System configuration

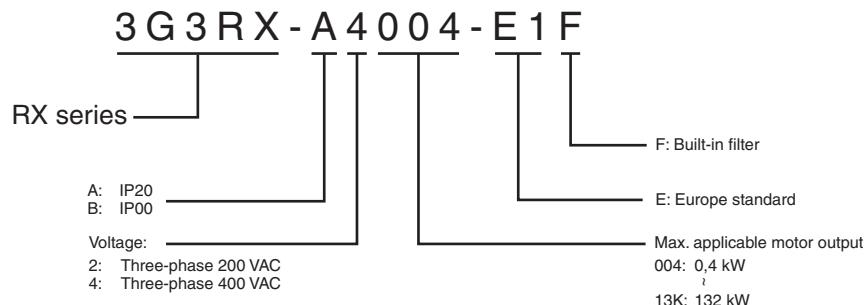


*1 The 5 lines LCD digital operator is provided with the inverter from factory.

*2 When a communication option board is mounted, there are two options: mount a blind cover or a LED digital operator.

Specifications

Type designation



200 V class

| Three-phase: 3G3RX-□ | | | A2004 | A2007 | A2015 | A2022 | A2037 | A2055 | A2075 | A2110 | A2150 | A2185 | A2220 | A2300 | A2370 | A2450 | A2550 | |
|---|-----------------------------------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------------------|-------|-------|-------|------|
| Max applicable motor 4P kW ¹ | | | at CT | 0.4 | 0.75 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | 18.5 | 22 | 30 | 37 | 45 | 55 |
| | | | at VT | 0.75 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | 18.5 | 22 | 30 | 37 | 45 | 55 | 75 |
| Output characteristics | Inverter capacity kVA | 200 V | at CT | 1.0 | 1.7 | 2.5 | 3.6 | 5.7 | 8.3 | 11.0 | 15.9 | 22.1 | 26.3 | 32.9 | 41.9 | 50.2 | 63.0 | 76.2 |
| | | 240 V | at VT | 1.3 | 2.1 | 3.2 | 4.1 | 6.7 | 10.4 | 15.2 | 20.0 | 26.3 | 29.4 | 39.1 | 49.5 | 59.2 | 72.7 | 93.5 |
| | Rated output current (A) | at CT | 1.2 | 2.0 | 3.1 | 4.3 | 6.8 | 9.9 | 13.3 | 19.1 | 26.6 | 31.5 | 39.4 | 50.2 | 60.2 | 75.6 | 91.4 | |
| | | at VT | 1.5 | 2.6 | 3.9 | 5.0 | 8.1 | 12.4 | 18.2 | 24.1 | 31.5 | 35.3 | 46.9 | 59.4 | 71.0 | 87.2 | 112.2 | |
| Max. output voltage | | | Proportional to input voltage: 0 to 240 V | | | | | | | | | | | | | | | |
| Max. output frequency | | | 400 Hz | | | | | | | | | | | | | | | |
| Power supply | Rated input voltage and frequency | | 3-phase 200 to 240 V 50/60 Hz | | | | | | | | | | | | | | | |
| | Allowable voltage fluctuation | | -15% to 10% | | | | | | | | | | | | | | | |
| | Allowable frequency fluctuation | | 5% | | | | | | | | | | | | | | | |
| Braking | Regenerative braking | | Internal BRD circuit (external discharge resistor) | | | | | | | | | | | External regenerative braking unit | | | | |
| | Minimum connectable resistance | | 50 | 50 | 35 | 35 | 35 | 16 | 10 | 10 | 7.5 | 7.5 | 5 | | | | | |
| Protective structure | | | IP20 | | | | | | | | | | | | | | | |
| Cooling method | | | Forced air cooling | | | | | | | | | | | | | | | |

*1 Based on a standard 3-Phase standard motor.

400 V class

| Three-phase: 3G3RX-□ | | | A4004 | A4007 | A4015 | A4022 | A4040 | A4055 | A4075 | A4110 | A4150 | A4185 | A4220 | A4300 | A4370 | A4450 | A4550 | B4750 | B4900 | B411K | B413K | | | | | | |
|---|-----------------------------------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|
| Max applicable motor 4P kW ¹ | | | at CT | 0.4 | 0.75 | 1.5 | 2.2 | 4.0 | 5.5 | 7.5 | 11 | 15 | 18.5 | 22 | 30 | 37 | 45 | 55 | 75 | 90 | 110 | 132 | | | | | |
| | | | at VT | 0.75 | 1.5 | 2.2 | 4.0 | 5.5 | 7.5 | 11 | 15 | 18.5 | 22 | 30 | 37 | 45 | 55 | 75 | 90 | 110 | 132 | 160 | | | | | |
| Output characteristics | Inverter capacity kVA | 400 V | at CT | 1.0 | 1.7 | 2.5 | 3.6 | 6.2 | 9.7 | 13.1 | 17.3 | 22.1 | 26.3 | 33.2 | 40.1 | 51.9 | 63.0 | 77.6 | 103.2 | 121.9 | 150.3 | 180.1 | | | | | |
| | | 480 V | at VT | 1.3 | 2.1 | 3.3 | 4.6 | 7.7 | 11.0 | 15.2 | 20.9 | 25.6 | 30.4 | 39.4 | 48.4 | 58.8 | 72.7 | 93.5 | 110.8 | 135 | 159.3 | 200.9 | | | | | |
| | Rated output current (A) | at CT | 1.2 | 2.0 | 3.1 | 4.3 | 7.4 | 11.6 | 15.8 | 20.7 | 26.6 | 31.5 | 39.9 | 48.2 | 62.3 | 75.6 | 93.1 | 123.8 | 146.3 | 180.4 | 216.1 | | | | | | |
| | | at VT | 1.5 | 2.5 | 4.0 | 5.5 | 9.2 | 13.3 | 18.2 | 24.1 | 30.7 | 36.5 | 47.3 | 58.1 | 70.6 | 87.2 | 112.2 | 133 | 162.1 | 191.2 | 241.1 | | | | | | |
| Max. output voltage | | | Proportional to input voltage: 0 to 480 V | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. output frequency | | | 400 Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply | Rated input voltage and frequency | | 3-phase 380 to 480 V 50/60 Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| | Allowable voltage fluctuation | | -15% to 10% | | | | | | | | | | | | | | | | | | | | | | | | |
| | Allowable frequency fluctuation | | 5% | | | | | | | | | | | | | | | | | | | | | | | | |
| Braking | Regenerative braking | | Internal BRD circuit (external discharge resistor) | | | | | | | | | | | External regenerative braking unit | | | | | | | | | | | | | |
| | Minimum connectable resistance | | 100 | 100 | 100 | 100 | 70 | 70 | 35 | 35 | 24 | 24 | 20 | | | | | | | | | | | | | | |
| Protective structure | | | IP20 | | | | | | | | | | | | | | | IP00 | | | | | | | | | |
| Cooling method | | | Forced air cooling | | | | | | | | | | | | | | | | | | | | | | | | |

*1 Based on a standard 3-Phase standard motor.

Common specifications

| | Model number 3G3RX | Specifications |
|----------------------|--|--|
| Control functions | Control methods | Phase-to-phase sinusoidal pulse with modulation PWM (Sensorless vector control, close loop vector with motor feedback, V/F) |
| | Output frequency range | 0.10 to 400.00 Hz |
| | Frequency precision | Digital set value: $\pm 0.01\%$ of the max. frequency 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 Analog input: 12 bit |
| | Resolution of output frequency | 0.01 Hz |
| | Starting torque | 150%/0.3 Hz (under sensor-less vector control or sensor-less vector control at 0 Hz) 200%/Torque at 0 Hz (under sensor-less vector control at 0Hz, when a motor size one rank lower than specified is connected) |
| | Overload capability | 150%/60 s, 200%/3 s for CT; 120%/60 s VT |
| | Frequency set value | 0 to 10 VDC (10 $\text{k}\Omega$), -10 to 10 VDC (10 $\text{k}\Omega$), 4 to 20 mA (100 Ω), RS485 Modbus, Network options |
| | V/f Characteristics | V/f optionally changeable at base frequencies of 30 to 400 Hz, V/f braking constant torque, reduction torque, sensor-less vector control, sensor-less vector control at 0 Hz |
| Functionality | Inputs signals | 8 terminals, NO/NC switchable, sink/source logic switchable [Terminal function] 8 functions can be selected from among 61. Reverse (RV), Multi-step speed setting binary 1 (CF1), Multi-step speed setting binary 2 (CF2), Multi-step speed setting binary 3 (CF3), Multi-step speed setting binary 4 (CF4), Jogging (JG), DC injection braking (DB), 2nd control (SET), 2-step acceleration/deceleration (2CH), Free-run stop (FRS), External trip (EXT), USP function (USP), Commercial switching (CS), Soft lock (SFT), Analog input switching (AT), 3rd control (SET3), Reset (RS), 3-wire start (STA), 3-wire stop (STP), 3-wire forward/reverse (F/R), PID enabled/disabled (PID), PID integral reset (PIDC), Control gain switching (CAS), UP/DWN function accelerated (UP), UP/DWN function decelerated (DWN), UP/DWN function data clear (UDC), Forced operator (OPE), Multi-step speed setting bit 1 (SF1), Multi-step speed setting bit 2 (SF2), Multi-step speed setting bit 3 (SF3), Multi-step speed setting bit 4 (SF4), Multi-step speed setting bit 5 (SF5), Multi-step speed setting bit 6 (SF6), Multi-step speed setting bit 7 (SF7), Overload limit switching (OLR), Torque limit enabled (TL), Torque limit switching 1 (TRQ1), Torque limit switching 2 (TRQ2), P/PI switching (PPI), Brake confirmation (BOK), Orientation (ORT), LAD cancel (LAC), Position deviation clear (PCLR), Pulse train position command input permission (STAT), Frequency addition function (ADD), Forced terminal block (F-TM), Torque reference input permission (ATR), Integrated power clear (KHC), Servo ON (SON), Preliminary excitation (FOC), Analog command on hold (AHD), Position command selection 1 (CP1), Position command selection 2 (CP2), Position command selection 3 (CP3), Zero return limit signal (ORL), Zero return startup signal (ORG), Forward driving stop (FOT), Reverse driving stop (ROT), Speed/Position switching (SPD), Pulse counter (PCNT), Pulse counter clear (PCC), No allocation (no) |
| | Output signals | 5 open collector output terminals: NO/NC switchable, sink/source logic switchable 1 relay (SPDT contact) output terminal: NO/NC switchable [Terminal function] 6 functions can be selected from among 45. Signal during RUN (RUN), Constant speed arrival signal (FA1), Over set frequency arrival signal (FA2), Overload warning (OL), Excessive PID deviation (OD), Alarm signal (AL), Set-frequency-only arrival signal (FA3), Overtorque (OTQ), Signal during momentary power interruption (IP), Signal during undervoltage (UV), Torque limit (TRQ), RUN time exceeded (RNT), Power ON time exceeded (ONT), Thermal warning (THM), Brake release (BRK), Brake error (BER), 0-Hz signal (ZS), Excessive speed deviation (DSE), Position ready (POK), Set frequency exceeded 2 (FA4), Set frequency only 2 (FA5), Overload warning 2 (OL2), Analog FV disconnection detection (FVDc), Analog FI disconnection detection (FIDc), Analog FE disconnection detection (FEDc), PID FB status output (FBV), Network error (NDc), Logic operation output 1 (LOG1), Logic operation output 2 (LOG2), Logic operation output 3 (LOG3), Logic operation output 4 (LOG4), Logic operation output 5 (LOG5), Logic operation output 6 (LOG6), Capacitor life warning (WAC), Cooling fan life warning (WAF), Starting contact signal (FR), Fan overheat warning (OHF), Light load detection signal (LOC), Operation ready (IRDY), Forward run (FWR), Reverse run (RVR), Fatal fault (MJA), Window comparator FV (WCFV), Window comparator FI (WCFI), Window comparator FE (WCFE), Alarm codes 0 to 3 (AC0 to AC3) |
| Standard functions | Standard functions | V/f free setting (7), Upper/lower frequency limit, Frequency jump, Curve acceleration/deceleration, Manual torque boost level/break, Energy-saving operation, Analog meter adjustment, Starting frequency, Carrier frequency adjustment, Electronic thermal function, (free setting available), External start/end (frequency/rate), Analog input selection, Trip retry, Restart during momentary power interruption, Various signal outputs, Reduced voltage startup, Overload limit, Initialization value setting, Automatic deceleration at power-off, AVR function, Automatic acceleration/deceleration, Auto tuning (Online/Offline), High torque multi-motor operation control (sensor-less vector control of two monitors with one inverter) |
| | Analogue inputs | Analogue inputs 0 to 10 V and -10 to 10 V (10 $\text{k}\Omega$), 4 to 20 mA (100 Ω) |
| | Analogue outputs | Analog voltage output, Analog current output, Pulse train output |
| | Accel/Decel times | 0.01 to 3,600.0 s (line/curve selection) |
| | Display | Status indicator LED's Run, Program, Power, Alarm, Hz, Amps, Volts, % Digital operator: Available to monitor 23 items, output current, output frequency... |
| Protection functions | Motor overload protection | Electronic Thermal overload relay and PTC thermistor input |
| | Instantaneous overcurrent | 200% of rated current for 3 seconds |
| | Overload | 150% for 1 minute |
| | Oversupply | 800 V for 400 V type and 400 V for 200 V type |
| | Momentary power loss | Decelerates to stop with DC bus controlled, coast to stop |
| | 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 |
| Ambient conditions | Power charge indication | On when voltage between P and N is higher than 45V |
| | Degree of protection | IP20/IP00 |
| | Ambient humidity | 90% RH or less (without condensation) |
| | Storage temperature | -20 to 65°C (short-term temperature during transportation) |
| | Ambient temperature | -10 to 50°C |
| | Installation | Indoor (no corrosive gas, dust, etc.) |
| | Installation height | Max. 1,000 m |
| | Vibration | 3G3RX-A□004 to A□220, 5.9 m/s^2 (0.6G), 10 to 55 Hz 3G3RX-A□300 to B□13K, 2.94 m/s^2 (0.3G), 10 to 55 Hz |

Dimensions

Figure 1

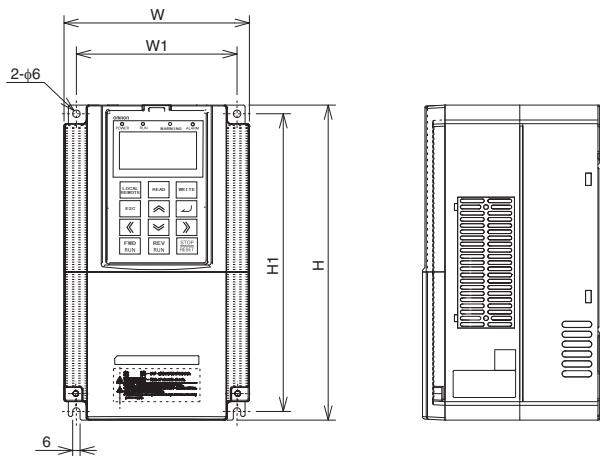


Figure 2

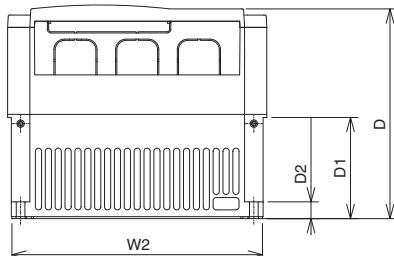
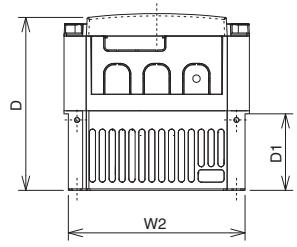
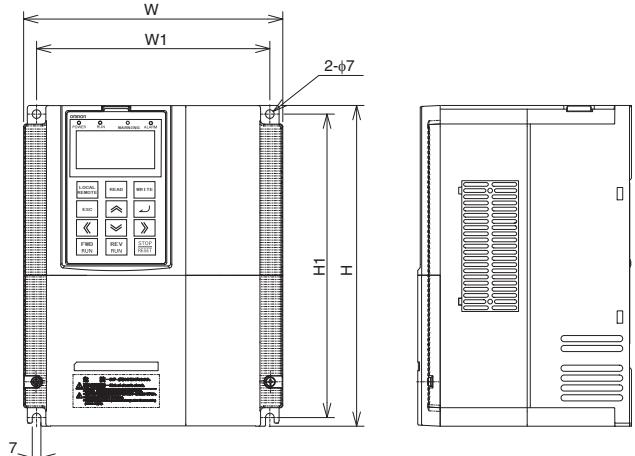


Figure 3

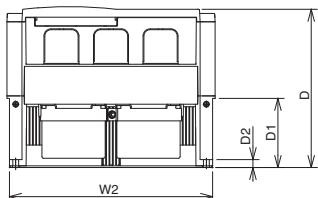
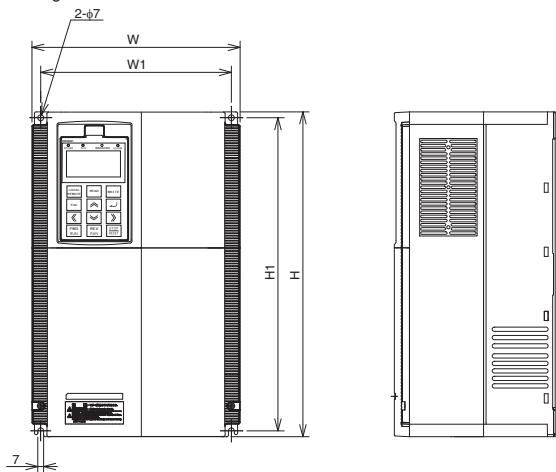


Figure 4

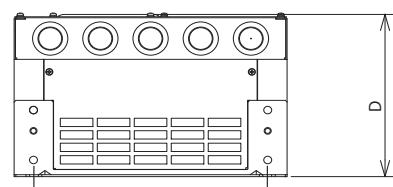
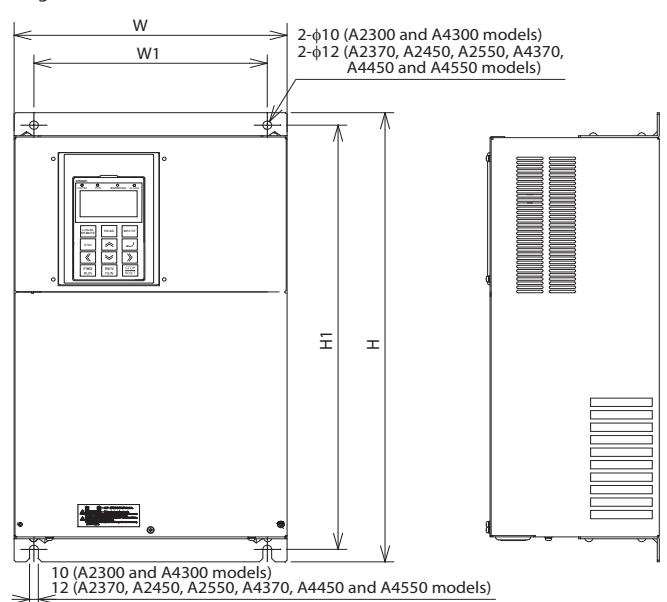
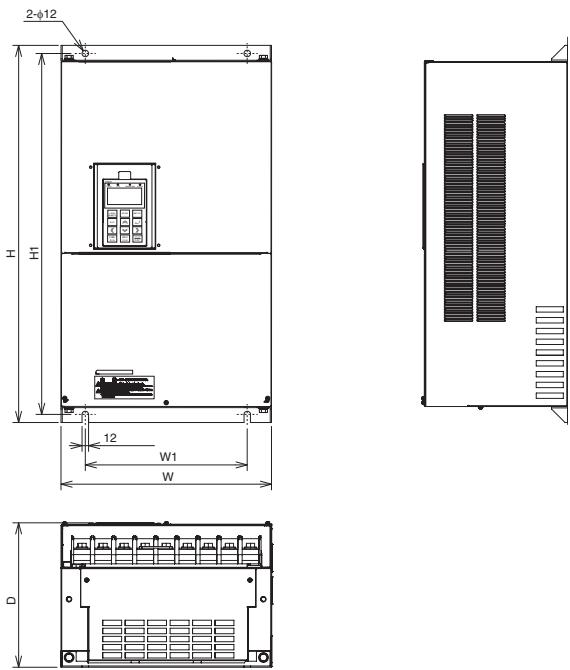
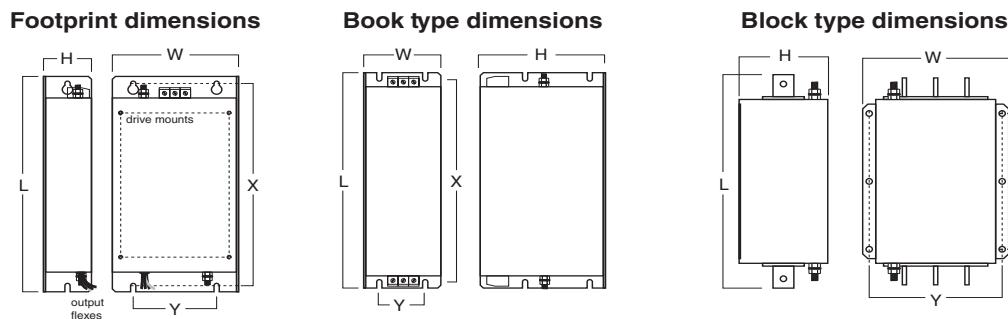


Figure 5

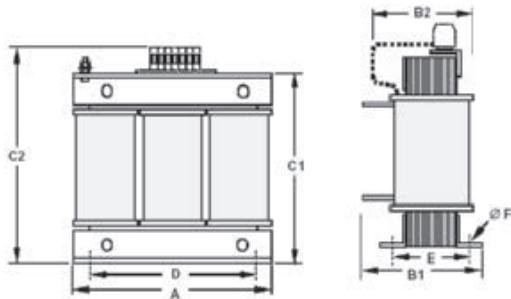


| Voltage class | Inverter model 3G3RX□ | Figure | Dimensions in mm | | | | | | | | |
|----------------------|-----------------------|--------|------------------|-----|-----|-----|-----|-----|----|------|-------------|
| | | | W | W1 | W2 | H | H1 | D | D1 | D2 | Weight (kg) |
| Three-phase 200 V | A2004 | 1 | 150 | 130 | 143 | 255 | 241 | 140 | 62 | — | 3.5 |
| | A2007 | | | | | | | | | | |
| | A2015 | | | | | | | | | | |
| | A2022 | | | | | | | | | | |
| | A2037 | | | | | | | | | | |
| | A2055 | 2 | 210 | 189 | 203 | 260 | 246 | 170 | 82 | 13.6 | 6 |
| | A2075 | | | | | | | | | | |
| | A2110 | | | | | | | | | | |
| | A2150 | 3 | 250 | 229 | 244 | 390 | 376 | 190 | 83 | 9.5 | 14 |
| | A2185 | | | | | | | | | | |
| | A2220 | | | | | | | | | | |
| | A2300 | 4 | 310 | 265 | — | 540 | 510 | 195 | — | — | 20 |
| | A2370 | | | | | | | | | | |
| | A2450 | | | | | | | | | | |
| | A2550 | | | | | | | | | | |
| Three-phase 400 V | A4004 | 1 | 150 | 130 | 143 | 255 | 241 | 140 | 62 | — | 3.5 |
| | A4007 | | | | | | | | | | |
| | A4015 | | | | | | | | | | |
| | A4022 | | | | | | | | | | |
| | A4040 | | | | | | | | | | |
| | A4055 | 2 | 210 | 189 | 203 | 260 | 246 | 170 | 82 | 13.6 | 6 |
| | A4075 | | | | | | | | | | |
| | A4110 | | | | | | | | | | |
| | A4150 | 3 | 250 | 229 | 244 | 390 | 376 | 190 | 83 | 9.5 | 14 |
| | A4185 | | | | | | | | | | |
| | A4220 | | | | | | | | | | |
| | A4300 | 4 | 310 | 265 | — | 540 | 510 | 195 | — | — | 22 |
| | A4370 | | | | | | | | | | |
| | A4450 | | | | | | | | | | |
| | A4550 | 5 | 390 | 300 | — | 550 | 520 | 250 | — | — | 30 |
| | B4750 | | | | | | | | | | |
| | B4900 | | | | | | | | | | |
| | B411K | | | | | | | | | | |
| | B413K | | | | | | | | | | |

Rasmi filters

| Voltage | Inverter model | Rasmi model | Dimensions | | | | | | Filter type | Weight (kg) | | | | | | | | |
|-----------|----------------|---------------|------------|-----|-----|-----|-----|----|-------------|-------------|--|--|--|--|--|--|--|--|
| | | | L | W | H | X | Y | M | | | | | | | | | | |
| 3 x 200 V | 3G3RX-A2004 | AX-FIR2018-RE | 305 | 152 | 45 | 290 | 110 | M5 | Footprint | 2.0 | | | | | | | | |
| | 3G3RX-A2007 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2015 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2022 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2037 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2055 | AX-FIR2053-RE | 320 | 212 | 56 | 296 | 189 | M6 | Footprint | 2.5 | | | | | | | | |
| | 3G3RX-A2075 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2110 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2150 | AX-FIR2110-RE | 455 | 110 | 240 | 414 | 80 | — | Book type | 8.0 | | | | | | | | |
| | 3G3RX-A2185 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2220 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2300 | AX-FIR2145-RE | 386 | 260 | 135 | 240 | 235 | — | Block type | 8.6 | | | | | | | | |
| | 3G3RX-A2370 | AX-FIR3250-RE | | | | | | | | | | | | | | | | |
| | 3G3RX-A2450 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A2550 | AX-FIR3320-RE | | | | | | | | 13.2 | | | | | | | | |
| 3 x 400 V | 3G3RX-A4004 | AX-FIR3010-RE | 305 | 152 | 45 | 290 | 110 | M5 | Footprint | 1.4 | | | | | | | | |
| | 3G3RX-A4007 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4015 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4022 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4040 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4055 | AX-FIR3030-RE | 312 | 212 | 50 | 296 | 189 | M6 | Footprint | 2.2 | | | | | | | | |
| | 3G3RX-A4075 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4110 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4150 | AX-FIR3053-RE | 451 | 252 | 60 | 435 | 229 | M6 | Footprint | 4.5 | | | | | | | | |
| | 3G3RX-A4185 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4220 | | | | | | | | | | | | | | | | | |
| | 3G3RX-A4300 | AX-FIR3064-RE | 598 | 310 | 70 | 578 | 265 | M8 | Book type | 7.0 | | | | | | | | |
| | 3G3RX-A4370 | AX-FIR3100-RE | 486 | 110 | 240 | 414 | 80 | — | | 8.0 | | | | | | | | |
| | 3G3RX-A4450 | AX-FIR3130-RE | | | | | | | | | | | | | | | | |
| | 3G3RX-A4550 | | | | | | | | | | | | | | | | | |
| | 3G3RX-B4750 | AX-FIR3250-RE | 386 | 260 | 135 | 240 | 235 | — | Block type | 13.0 | | | | | | | | |
| | 3G3RX-B4900 | | | | | | | | | | | | | | | | | |
| | 3G3RX-B411K | | | | | | | | | | | | | | | | | |
| | 3G3RX-B413K | AX-FIR3320-RE | | | | | | | | 13.2 | | | | | | | | |

Input AC Reactor



| Voltage | Reference | Dimensions | | | | | | | | Weight (kg) | | | | | | |
|---------|-------------------|------------|-----|-----|-----|-----|----|-----|------|-------------|--|--|--|--|--|--|
| | | A | B1 | B2 | C1 | C2 | D | E | F | | | | | | | |
| 200 V | AX-RAI02800080-DE | 120 | 70 | 80 | 120 | 80 | 52 | 5.5 | 1.78 | 2.35 | | | | | | |
| | AX-RAI00880200-DE | | | | | | | | | | | | | | | |
| | AX-RAI00350335-DE | | | | | | | | | | | | | | | |
| | AX-RAI00180670-DE | | 85 | 190 | 140 | 55 | 6 | 85 | 11.7 | 5.5 | | | | | | |
| | AX-RAI00091000-DE | | | | | | | | | | | | | | | |
| | AX-RAI00071550-DE | | 105 | 205 | | | | | | | | | | | | |
| | AX-RAI00042300-DE | | 120 | — | 150 | — | | | | | | | | | | |
| 400 V | AX-RAI07700050-DE | 120 | 70 | 80 | 120 | 80 | 52 | 5.5 | 1.78 | 2.35 | | | | | | |
| | AX-RAI03500100-DE | | | | | | | | | | | | | | | |
| | AX-RAI01300170-DE | | | 75 | 195 | 140 | 55 | 6 | 11.2 | 5.5 | | | | | | |
| | AX-RAI00740335-DE | | | | | | | | | | | | | | | |
| | AX-RAI00360500-DE | | 85 | 190 | | | | | | | | | | | | |
| | AX-RAI00290780-DE | | | | | | | | | | | | | | | |
| | AX-RAI00191150-DE | 240 | 105 | 205 | 275 | 200 | 75 | 110 | 16.0 | 25.4 | | | | | | |
| | AX-RAI00111850-DE | | | | | | | | | | | | | | | |
| | AX.RAI00072700-DE | | 180 | — | 210 | — | | | | | | | | | | |

DC reactor

Figure 1

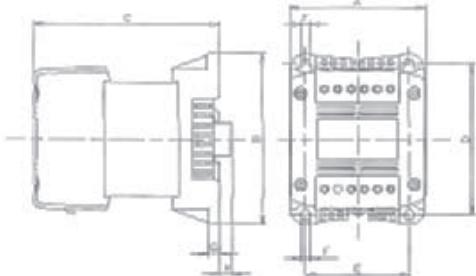
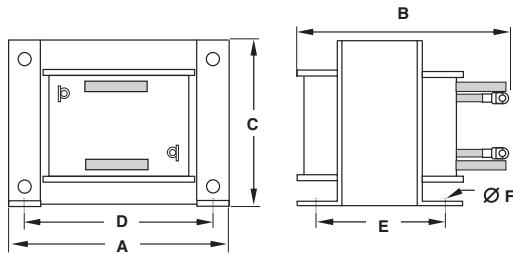
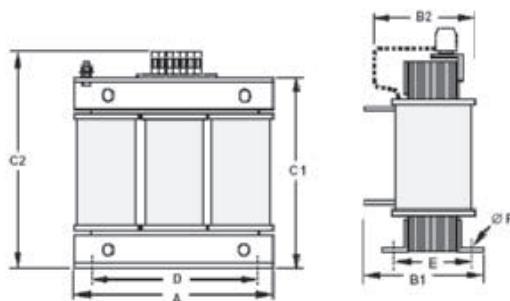


Figure 2



| 200 V | | | | | | | | | | 400 V | | | | | | | | | | | |
|-----------------|-----|------------|-----|-----|-----|-----|------|-----|---|-------------|-----------------|-----|------------|------|-----|-----|-----|-----|------|-----|------|
| Reference AX-RC | Fig | Dimensions | | | | | | | | kg | Reference AX-RC | Fig | Dimensions | | | | | | | | kg |
| | | A | B | C | D | E | F | G | H | | | | A | B | C | D | E | F | G | H | |
| 10700032-DE | 1 | 84 | 96 | 105 | 101 | 66 | 5 | 7.5 | 2 | 1.22 | 43000020-DE | 1 | 84 | 96 | 105 | 101 | 66 | 5 | 7.5 | 2 | 1.22 |
| 06750061-DE | | | | | | | | | | 1.60 | 27000030-DE | | | | | | | | | | 1.60 |
| 03510093-DE | | | | | | | | | | 1.95 | 14000047-DE | | | | | | | | | | 1.95 |
| 02510138-DE | | | | | | | | | | 3.20 | 10100069-DE | | | | | | | | | | 3.70 |
| 01600223-DE | | 108 | 135 | 124 | 120 | 82 | 6.5 | 9.5 | — | 5.20 | 06400116-DE | | | 108 | 135 | 133 | 120 | 82 | 6.5 | 9.5 | 5.20 |
| 01110309-DE | | 120 | 152 | 136 | 135 | 94 | 6.00 | | | 04410167-DE | 120 | | | 152 | 136 | 135 | 94 | 7 | 6.00 | | |
| 00840437-DE | | 150 | 177 | 160 | 160 | 115 | 7 | 2 | — | 11.4 | 03350219-DE | | | 150 | 177 | 160 | 160 | 115 | 7 | — | 11.4 |
| 00590614-DE | | | | | | | | | | 14.3 | 02330307-DE | | | 14.3 | | | | | | | |
| 00440859-DE | | 2 | 195 | 161 | 163 | 185 | 88 | 10 | — | 17.0 | 01200644-DE | | | 195 | 161 | 163 | 185 | 88 | 10 | — | 17.0 |
| 00301275-DE | | | | | | | | | | 25.5 | 00920797-DE | | | 25.5 | | | | | | | |
| 00231662-DE | | | | 188 | 200 | 228 | 109 | — | — | 34.0 | 00741042-DE | | | 34.0 | | | | | | | |
| 00192015-DE | | | | | | | | | | 38.0 | 00611236-DE | | | 38.0 | | | | | | | |
| 00162500-DE | | | 240 | 198 | 198 | 228 | 119 | 12 | — | 42.0 | 00501529-DE | | | 48.0 | | | | | | | |
| 00133057-DE | | | | | | | | | | 00372094-DE | 49.0 | | | | | | | | | | |
| | | | | | | | | | | 00312446-DE | 52.5 | | | | | | | | | | |
| | | | | | | | | | | 00252981-DE | 79.0 | | | | | | | | | | |
| | | | | | | | | | | 00213613-DE | | | | | | | | | | | |

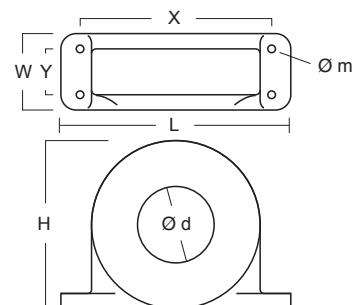
Output AC reactor



| Reference | Dimensions | | | | | | | | Weight kg |
|-------------------|------------|-----|-----|-----|-----|-----|-----|-----|-----------|
| | A | B1 | B2 | C1 | C2 | D | E | F | |
| 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-RAO01830160-DE | 180 | — | 85 | — | 190 | 140 | 55 | 6 | 5.5 |
| AX-RAO01150220-DE | 180 | — | 85 | — | 190 | 140 | 55 | 6 | 5.5 |
| AX-RAO00950320-DE | 180 | — | 85 | — | 205 | 140 | 55 | 6 | 6.5 |
| AX-RAO00630430-DE | 180 | — | 95 | — | 205 | 140 | 65 | 6 | 9.1 |
| AX-RAO00490640-DE | 180 | — | 95 | — | 205 | 140 | 65 | 6 | 9.1 |
| AX-RAO00390800-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO00330950-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO00251210-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO00191450-DE | 240 | — | 120 | — | 275 | 200 | 85 | 6 | 18.6 |
| AX-RAO00161820-DE | 240 | — | 150 | — | 275 | 200 | 110 | 6 | 27.0 |
| AX-RAO00132200-DE | 300 | — | 145 | — | 320 | 200 | 125 | 6 | 33.5 |
| 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 | — | 85 | — | 190 | 140 | 55 | 6 | 5.5 |
| AX-RAO04600110-DE | 180 | — | 85 | — | 190 | 140 | 55 | 6 | 5.5 |
| AX-RAO03600160-DE | 180 | — | 85 | — | 205 | 140 | 55 | 6 | 6.5 |
| AX-RAO02500220-DE | 180 | — | 95 | — | 205 | 140 | 65 | 6 | 9.1 |
| AX-RAO02000320-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO01650400-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO01300480-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO01030580-DE | 240 | — | 110 | — | 275 | 200 | 75 | 6 | 16.0 |
| AX-RAO00800750-DE | 240 | — | 120 | — | 275 | 200 | 85 | 6 | 18.6 |
| AX-RAO00680900-DE | 240 | — | 150 | — | 275 | 200 | 110 | 6 | 27.0 |
| AX-RAO00531100-DE | 300 | — | 125 | — | 330 | 200 | 105 | 6 | 27.9 |
| AX-RAO00401490-DE | 300 | — | 165 | — | 330 | 200 | 125 | 6 | 44.0 |
| AX-RAO00331760-DE | 300 | — | 165 | — | 330 | 200 | 125 | 6 | 44.0 |
| AX-RAO00262170-DE | 360 | 230 | — | 315 | — | 300 | 150 | 8 | 55.0 |
| AX-RAO00212600-DE | 420 | 255 | — | 360 | — | 300 | 145 | 8 | 102.0 |

Chokes

| Reference | D diameter | Motor kW | Dimensions | | | | | | Weight kg |
|---------------|---------------|-------------|------------|----|-----|-----|----|---|--------------|
| | | | L | W | H | X | Y | m | |
| AX-FER2102-RE | 21 | <2.2 | 85 | 22 | 46 | 70 | — | 5 | 0.1 |
| AX-FER2515-RE | 25 | <15 | 105 | 25 | 62 | 90 | — | 5 | 0.2 |
| AX-FER5045-RE | 50 | <45 | 150 | 50 | 110 | 125 | 30 | 5 | 0.7 |
| AX-FER6055-RE | 60 | ≥55 | 200 | 65 | 170 | 180 | 45 | 6 | 1.7 |



Braking unit dimensions

| Reference | Dimensions | | | | | |
|------------------|------------|------|-----|-----|-----|---|
| | B | B1 | H | H1 | T | S |
| AX-BCR4015045-TE | 82.5 | 40.5 | 150 | 138 | 220 | 6 |
| AX-BCR4017068-TE | | | | | | |
| AX-BCR2035090-TE | 130 | 64.5 | 205 | 193 | 208 | 6 |
| AX-BCR2070130-TE | | | | | | |
| AX-BCR4035090-TE | | | | | | |
| AX-BCR4070130-TE | | | | | | |
| AX-BCR4090240-TE | 131 | 64.5 | 298 | 280 | 300 | 9 |

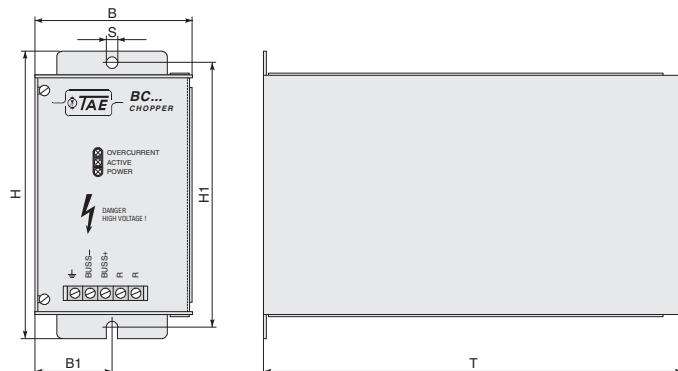
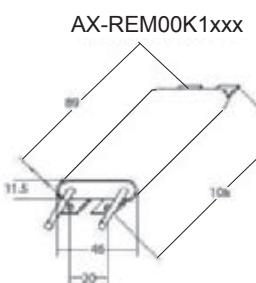
**Resistor dimensions**

Fig 1

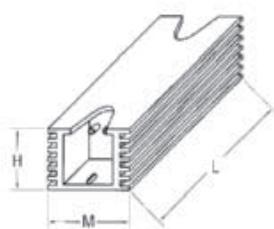


Fig 2

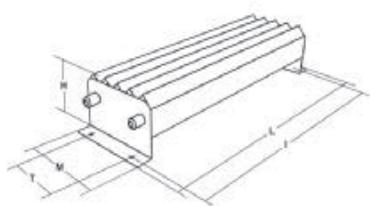


Fig 3

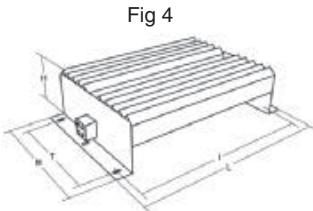


Fig 4

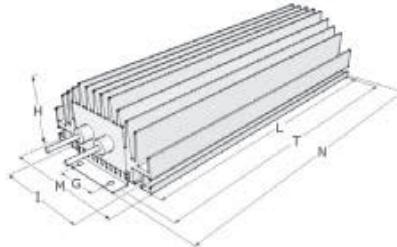
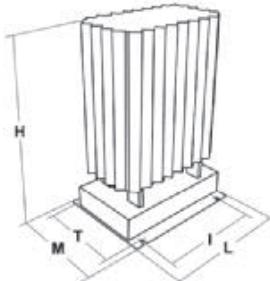
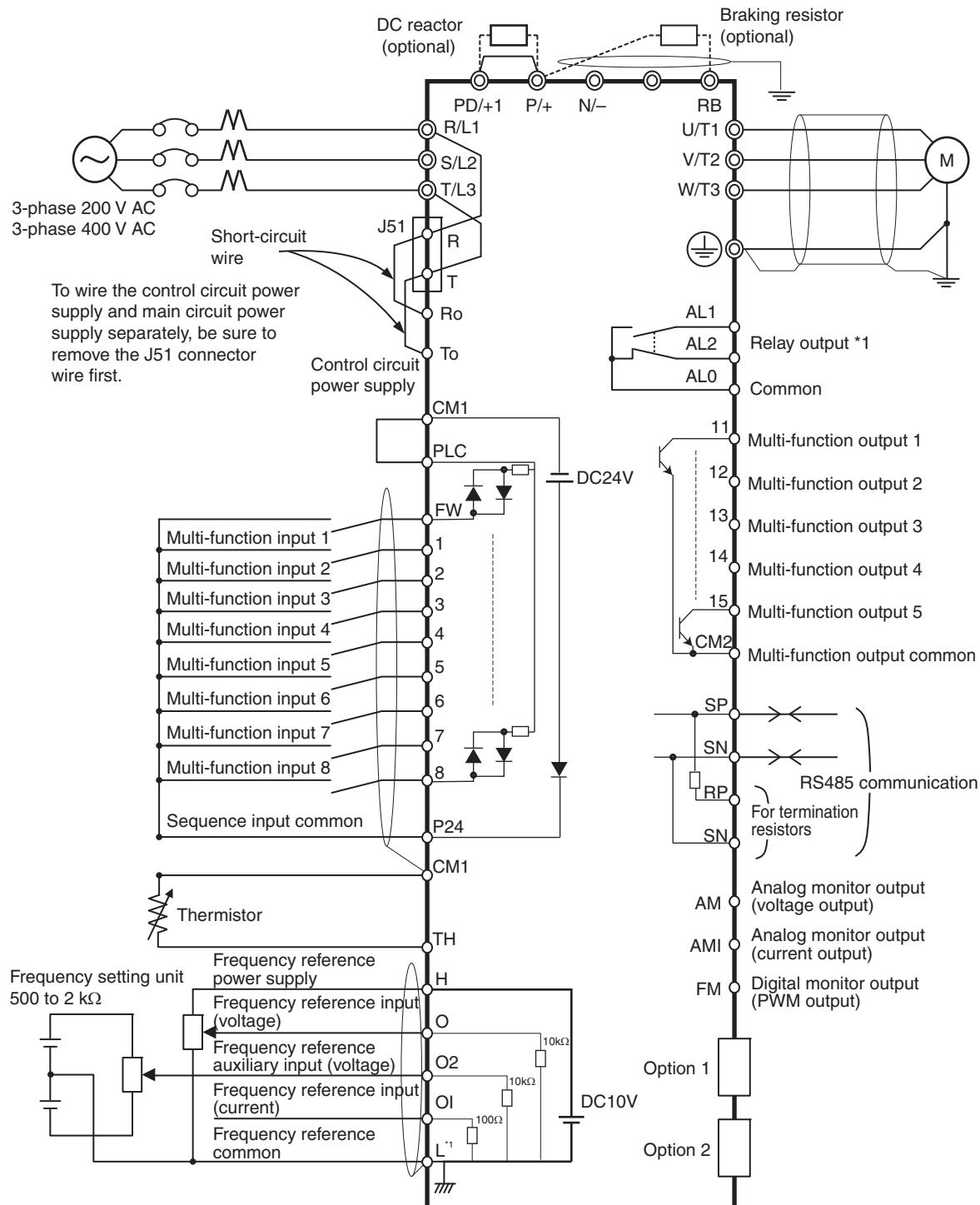


Fig 5



| Type | Fig. | Dimensions | | | | | | | Weight | |
|------------------|------|------------|-----|-----|-----|-----|----|-----|--------|--|
| | | L | H | M | I | T | G | N | | |
| AX-REM00K2070-IE | 1 | 105 | 27 | 36 | 94 | - | - | - | 0.2 | |
| AX-REM00K2120-IE | | | | | | | | | | |
| AX-REM00K2200-IE | | 200 | 27 | 36 | 189 | - | - | - | | |
| AX-REM00K4075-IE | | | | | | | | | | |
| AX-REM00K4035-IE | | 260 | 27 | 36 | 249 | - | - | - | | |
| AX-REM00K4030-IE | | | | | | | | | | |
| AX-REM00K5120-IE | 2 | 320 | 27 | 36 | 309 | - | - | - | 0.58 | |
| AX-REM00K6100-IE | | | | | | | | | | |
| AX-REM00K6035-IE | | 200 | 62 | 100 | 74 | 211 | 40 | 230 | | |
| AX-REM00K9070-IE | | | | | | | | | | |
| AX-REM00K9020-IE | | 365 | 73 | 105 | 350 | 70 | - | - | | |
| AX-REM00K9017-IE | | | | | | | | | | |
| AX-REM01K9070-IE | 3 | 365 | 73 | 105 | 350 | 70 | - | - | 4 | |
| AX-REM01K9017-IE | | | | | | | | | | |
| AX-REM02K1070-IE | | 310 | 100 | 240 | 295 | 210 | - | - | | |
| AX-REM02K1017-IE | | | | | | | | | | |
| AX-REM03K5035-IE | | 365 | 100 | 240 | 350 | 210 | - | - | | |
| AX-REM03K5010-IE | | | | | | | | | | |
| AX-REM19K0006-IE | 4 | 206 | 350 | 140 | 190 | 50 | - | - | 8 | |
| AX-REM19K0008-IE | | | | | | | | | | |
| AX-REM19K0020-IE | | 306 | 350 | 140 | 290 | 50 | - | - | | |
| AX-REM19K0030-IE | | | | | | | | | | |
| AX-REM38K0012-IE | | | | | | | | | | |

Standard connections



^{*1} L is the common reference for analog input and also for analog output.

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. |
| 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/+, RB | Braking resistor connection terminals | Connect option braking resistor (if a braking torque is required) |
| P/+, N- | Regenerative braking unit connection terminal | Connect optional regenerative braking units. |
| ⏚ | Grounding | For grounding (grounding should conform to the local grounding code.) |

Control circuit

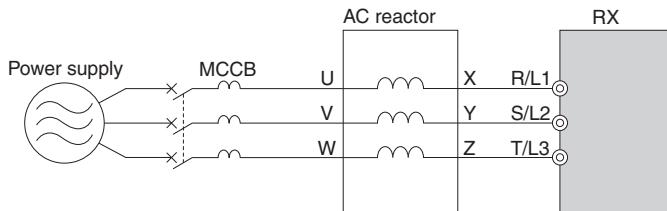
| Type | No. | Signal name | Function | Signal level |
|---------------------------|-----|---------------------------------------|---|---|
| Frequency reference input | H | Frequency reference power supply | 10 VDC 20 mA max | |
| | O | Voltage frequency reference input | 0 to 12 VDC (10 kΩ) | |
| | O2 | Voltage auxiliary frequency reference | 0 to ±12 VDC (10 kΩ) | |
| | OI | Current frequency reference input | 4 to 20 mA (100 Ω) | |
| | L | Frequency reference common | Common terminal for analog monitor (AM, AMI) terminals | |
| Monitor output | AM | Multi-function analog voltage output | Factory setting: Output frequency | 2 mA max |
| | AMI | Multi-function analog current output | Factory setting: Output frequency | 4 to 20 mA (max imp 250 Ω) |
| | FM | PWM monitor output | Factory setting: Output frequency | 0 to 10 VDC max 3.6 kHz |
| Power supply | P24 | Internal 24 VDC | Power supply for contact input signal | 100 mA max |
| | CM1 | Input common | Common terminal for P24, TH and FM digital monitor | |
| Function selection | FW | Forward rotation command terminal | Motor runs in forwards direction when FW is ON | 27 VDC max Input imped 4.7 kΩ max current 5.6 mA On: 18 VDC or more |
| | 1 | Multi-function input | Factory setting: Reverse (RV) | |
| | 2 | | Factory setting: External trip (EXT) | |
| | 3 | | Factory setting: Reset (RS) | |
| | 4 | | Factory setting: Multi-step speed reference 1 (CF1) | |
| | 5 | | Factory setting: Multi-step speed reference 2 (CF2) | |
| | 6 | | Factory setting: Jogging (JG) | |
| | 7 | | Factory setting: Second control (SET) | |
| | 8 | | Factory setting: No allocation (NO) | |
| | PLC | Multi-function input common | Sink logic: Short-circuiting P24 and PLC Source logic: Short-circuiting PLC and CM1 With external supply remove short-circuit bar | |
| Status/Factor | 11 | Multi-function output | Factory setting: During Run (RUN) | 27 VDC max 50 mA max |
| | 12 | | Factory setting: 0 Hz signal (ZS) | |
| | 13 | | Factory setting: Overload warning (OL) | |
| | 14 | | Factory setting: Overtorque (OTQ) | |
| | 15 | | Factory setting: Constant speed arrival (FA1) | |
| | CM2 | Multi-function output common | Common terminal for multi-function output terminals 11 to 15 | |
| Relay output | AL1 | Relay output (Normally close) | Under normal operation MA-MC open MB-MC close | R load AL1-AL0 250 VAC 2 A AL2-AL0 250 VAC 1 A I load 250 VAC 0.2 A |
| | AL2 | Relay output (Normally open) | | |
| | AL0 | Relay output common | | |
| Sensor | TH | External thermistor input terminal | SC terminal functions as the common terminal 100 mΩ minimum Impedance at temperature error: 3 kΩ | 0 to 8 VDC |
| Comms | SP | RS485 Modbus terminals | — | Differential input |
| | SN | | | |
| | RP | RS485 terminating resistor terminals | — | — |
| | SN | | | |

Inverter heat loss**Three-phase 200 V class**

| Model 3G3RX- | A2004 | A2007 | A2015 | A2022 | A2037 | A2055 | A2075 | A2110 | A2150 | A2185 | A2220 | A2300 | A2370 | A2450 | A2550 | |
|----------------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inverter capacity kVA | 200 V | 1.0 | 1.7 | 2.5 | 3.6 | 5.7 | 8.3 | 11.0 | 15.9 | 22.1 | 26.3 | 32.9 | 41.9 | 50.2 | 63.0 | 76.2 |
| | 240 V | 1.2 | 2.0 | 3.1 | 4.3 | 6.8 | 9.9 | 13.3 | 19.1 | 26.6 | 31.5 | 39.4 | 50.2 | 60.2 | 75.6 | 91.4 |
| Rated current (A) | 3.0 | 5.0 | 7.5 | 10.5 | 16.5 | 24 | 32 | 46 | 64 | 76 | 95 | 121 | 145 | 182 | 220 | |
| Heat loss W | Losses at 70% load | 64 | 76 | 102 | 127 | 179 | 242 | 312 | 435 | 575 | 698 | 820 | 1,100 | 1,345 | 1,625 | 1,975 |
| | Losses at 100% load | 70 | 88 | 125 | 160 | 235 | 325 | 425 | 600 | 800 | 975 | 1,150 | 1,550 | 1,900 | 2,300 | 2,800 |
| Efficiency at rated output | 85.1 | 89.5 | 92.3 | 93.2 | 94.0 | 94.4 | 94.6 | 94.8 | 94.9 | 95.0 | 95.0 | 95.0 | 95.1 | 95.1 | 95.1 | 95.1 |
| Cooling Method | Forced-air-cooling | | | | | | | | | | | | | | | |

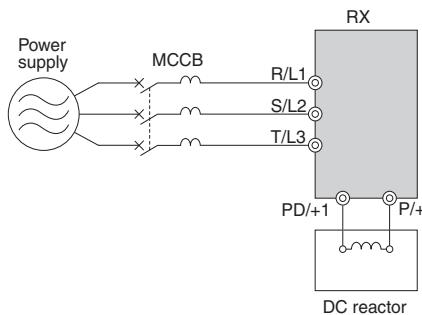
Three-phase 400 V class

| Model 3G3RX- | A4004 | A4007 | A4015 | A4022 | A4040 | A4055 | A4075 | A4110 | A4150 | A4185 | A4220 | A4300 | A4370 | A4450 | A4550 | B4750 | B4900 | B411K | B413K | |
|----------------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inverter capacity kVA | 400 V | 1.0 | 1.7 | 2.5 | 3.6 | 6.2 | 9.7 | 13.1 | 17.3 | 22.1 | 26.3 | 33.2 | 40.1 | 51.9 | 63.0 | 77.6 | 103.2 | 121.9 | 150.3 | 180.1 |
| | 480 V | 1.2 | 2.0 | 3.1 | 4.3 | 7.4 | 11.6 | 15.8 | 20.7 | 26.6 | 31.5 | 39.9 | 48.2 | 62.3 | 75.6 | 93.1 | 123.8 | 146.3 | 180.4 | 216.1 |
| Rated current (A) | 1.5 | 2.5 | 3.8 | 5.3 | 9.0 | 14 | 19 | 25 | 32 | 38 | 48 | 58 | 75 | 91 | 112 | 149 | 176 | 217 | 260 | |
| Heat loss W | Losses at 70% load | 64 | 76 | 102 | 127 | 179 | 242 | 312 | 435 | 575 | 698 | 820 | 1,100 | 1,345 | 1,625 | 1,975 | 2,675 | 3,375 | 3,900 | 4,670 |
| | Losses at 100% load | 70 | 88 | 125 | 160 | 235 | 325 | 425 | 600 | 800 | 975 | 1,150 | 1,550 | 1,900 | 2,300 | 2,800 | 3,800 | 4,800 | 5,550 | 6,650 |
| Efficiency at rated output | 85.1 | 89.5 | 92.3 | 93.2 | 94.0 | 64.4 | 94.6 | 94.8 | 94.9 | 95.0 | 95.0 | 95.0 | 95.1 | 95.1 | 95.2 | 95.2 | 95.2 | 95.2 | 95.2 | |
| Cooling Method | Forced-air-cooling | | | | | | | | | | | | | | | | | | | |

Input AC Reactor

| 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 |
| 0.4 to 1.5 | AX-RAI02800080-DE | 8.0 | 2.8 | 0.4 to 1.5 | AX-RAI07700050-DE | 5.0 | 7.7 |
| 2.2 to 3.7 | AX-RAI00880200-DE | 20.0 | 0.88 | 2.2 to 4.0 | AX-RAI03500100-DE | 10.0 | 3.5 |
| 5.5 to 7.5 | AX-RAI00350335-DE | 33.5 | 0.35 | 5.5 to 7.5 | AX-RAI01300170-DE | 17.0 | 1.3 |
| 11.0 to 15.0 | AX-RAI00180670-DE | 67.0 | 0.18 | 11.0 to 15.0 | AX-RAI00740335-DE | 33.5 | 0.74 |
| 18.5 to 22.0 | AX-RAI00091000-DE | 100.0 | 0.09 | 18.5 to 22.0 | AX-RAI00360500-DE | 50.0 | 0.36 |
| 30.0 to 37.0 | AX-RAI00071550-DE | 155.0 | 0.07 | 30.0 to 37.0 | AX-RAI00290780-DE | 78.0 | 0.29 |
| 45.0 to 55.0 | AX-RAI00042300-DE | 230.0 | 0.04 | 45.0 to 55.0 | AX-RAI00191150-DE | 115.0 | 0.19 |
| | | | | 75.0 to 90.0 | AX-RAI00111850-DE | 185.0 | 0.11 |
| | | | | 110.0 to 132.0 | AX-RAI00072700-DE | 270.0 | 0.07 |

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 |
| 0.4 | AX-RC10700032-DE | 3.2 | 10.70 | 0.4 | AX-RC43000020-DE | 2.0 | 43.00 |
| 0.7 | AX-RC06750061-DE | 6.1 | 6.75 | 0.7 | AX-RC27000030-DE | 3.0 | 27.00 |
| 1.5 | AX-RC03510093-DE | 9.3 | 3.51 | 1.5 | AX-RC14000047-DE | 4.7 | 14.00 |
| 2.2 | AX-RC02510138-DE | 13.8 | 2.51 | 2.2 | AX-RC10100069-DE | 6.9 | 10.10 |
| 3.7 | AX-RC01600223-DE | 22.3 | 1.60 | 4.0 | AX-RC06400116-DE | 11.6 | 6.40 |
| 5.5 | AX-RC01110309-DE | 30.9 | 1.11 | 5.5 | AX-RC04410167-DE | 16.7 | 4.41 |
| 7.5 | AX-RC00840437-DE | 43.7 | 0.84 | 7.5 | AX-RC03350219-DE | 21.9 | 3.35 |
| 11.0 | AX-RC00590614-DE | 61.4 | 0.59 | 11.0 | AX-RC02330307-DE | 30.7 | 2.33 |
| 15.0 | AX-RC00440859-DE | 85.9 | 0.44 | 15.0 | AX-RC01750430-DE | 43.0 | 1.75 |
| 18.5 to 22 | AX-RC00301275-DE | 127.5 | 0.30 | 18.5 to 22 | AX-RC01200644-DE | 64.4 | 1.20 |
| 30 | AX-RC00231662-DE | 166.2 | 0.23 | 30 | AX-RC00920797-DE | 79.7 | 0.92 |
| 37 | AX-RC00192015-DE | 201.5 | 0.19 | 37 | AX-RC00741042-DE | 104.2 | 0.74 |
| 45 | AX-RC00162500-DE | 250.0 | 0.16 | 45 | AX-RC00611236-DE | 123.6 | 0.61 |
| 55 | AX-RC00133057-DE | 305.7 | 0.13 | 55 | AX-RC00501529-DE | 152.9 | 0.50 |
| | | | | 75 | AX-RC00372094-DE | 209.4 | 0.37 |
| | | | | 90 | AX-RC00312446-DE | 244.6 | 0.31 |
| | | | | 110 | AX-RC00252981-DE | 298.1 | 0.25 |
| | | | | 132 | AX-RC00213613-DE | 361.3 | 0.21 |

Output AC Reactor

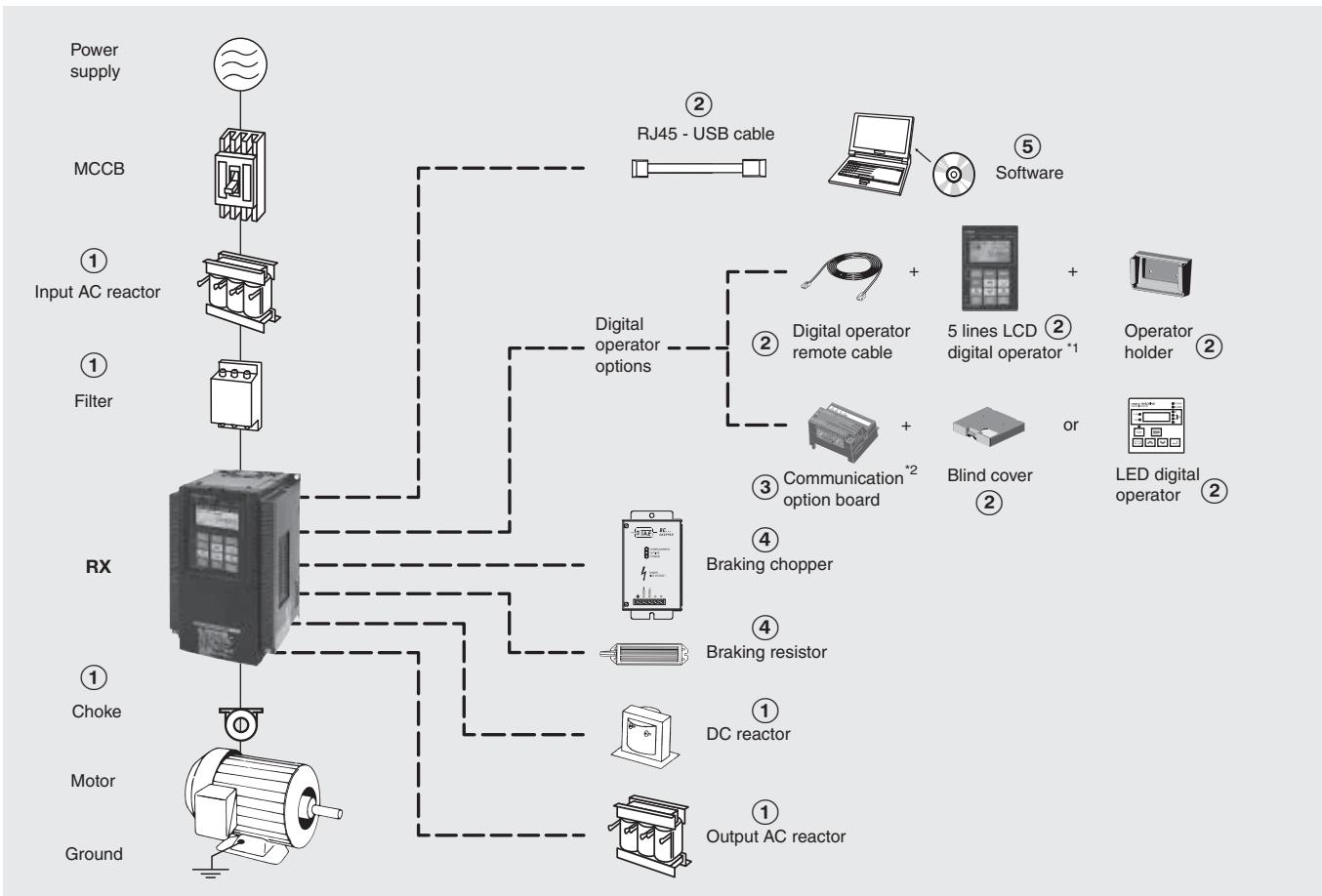
| 200 V class | | | | 400 V class | | | |
|---|-------------------|-----------------|---------------|---|-------------------|-----------------|---------------|
| Max. applicable motor output kW ^{*1} | Reference | Current value A | Inductance mH | Max. applicable motor output kW ^{*1} | Reference | Current value A | Inductance mH |
| 0.4 | AX-RAO11500026-DE | 2.6 | 11.50 | 0.4 to 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 |
| 18.5 | AX-RAO00390800-DE | 80.0 | 0.39 | 18.5 | AX-RAO01650400-DE | 40.0 | 1.65 |
| 22 | AX-RAO00330950-DE | 95.0 | 0.33 | 22 | AX-RAO01300480-DE | 48.0 | 1.30 |
| 30 | AX-RAO00251210-DE | 121.0 | 0.25 | 30 | AX-RAO01030580-DE | 58.0 | 1.03 |
| 37 | AX-RAO00191450-DE | 145.0 | 0.19 | 37 | AX-RAO00800750-DE | 75.0 | 0.80 |
| 45 | AX-RAO00161820-DE | 182.0 | 0.16 | 45 | AX-RAO00680900-DE | 90.0 | 0.68 |
| 55 | AX-RAO00132200-DE | 220.0 | 0.13 | 55 | AX-RAO00531100-DE | 110.0 | 0.53 |
| | | | | 75 | AX-RAO00401490-DE | 149.0 | 0.40 |
| | | | | 90 | AX-RAO00331760-DE | 176.0 | 0.33 |
| | | | | 110 | AX-RAO00262170-DE | 217.0 | 0.26 |
| | | | | 132 | AX-RAO00212600-DE | 260.0 | 0.21 |

^{*1} The motor sizes are for heavy duty applications

Braking Unit

| Voltage | Reference | Specifications | | | | |
|---------|------------------|----------------|-------------------|---------------|-------------------|-------------------------------------|
| | | Permanent | | Peak (5s max) | | Minimum connectable resistor (Ohms) |
| | | Current (A) | Brake power (kVA) | Current (A) | Brake power (kVA) | |
| 200 V | AX-BCR2035090-TE | 35 | 13 | 90 | 32 | 4 |
| | AX-BCR2070130-TE | 70 | 25 | 130 | 47 | 2.8 |
| 400 V | AX-BCR4015045-TE | 15 | 11 | 45 | 33 | 16 |
| | AX-BCR4017068-TE | 17 | 13 | 68 | 51 | 11 |
| | AX-BCR4035090-TE | 35 | 26 | 90 | 67 | 8.5 |
| | AX-BCR4070130-TE | 70 | 52 | 130 | 97 | 5.5 |
| | AX-BCR4090240-TE | 90 | 67 | 240 | 180 | 3.2 |

Ordering information



*1 The 5 lines LCD digital operator is provided with the inverter from factory.

*2 When a communication option board is mounted, there are two options: mount a blind cover or a LED digital operator.

3G3RX

| Specifications | | | | Model | Specifications | | | | Model | | |
|----------------------|-----------------|-----------------|-----------------|----------|----------------------|-----------------|-----------------|-----------------|----------|-----------------|--|
| Voltage class | Constant torque | | Variable torque | Standard | Voltage class | Constant torque | | Variable torque | Standard | | |
| | Max motor kW | Rated current A | Max motor kW | | | Max motor kW | Rated current A | Max motor kW | | | |
| Three-phase 200 V | 0.4 | 3.0 | 0.75 | 3.7 | Three-phase 400 V | 0.4 | 1.5 | 0.75 | 1.9 | 3G3RX-A4004-E1F | |
| | 0.75 | 5.0 | 1.5 | 6.3 | | 0.75 | 2.5 | 1.5 | 3.1 | 3G3RX-A4007-E1F | |
| | 1.5 | 7.5 | 2.2 | 9.4 | | 1.5 | 3.8 | 2.2 | 4.8 | 3G3RX-A4015-E1F | |
| | 2.2 | 10.5 | 4.0 | 12 | | 2.2 | 5.3 | 4.0 | 6.7 | 3G3RX-A4022-E1F | |
| | 4.0 | 16.5 | 5.5 | 19.6 | | 4.0 | 9.0 | 5.5 | 11.1 | 3G3RX-A4040-E1F | |
| | 5.5 | 24 | 7.5 | 30 | | 5.5 | 14 | 7.5 | 16 | 3G3RX-A4055-E1F | |
| | 7.5 | 32 | 11 | 44 | | 7.5 | 19 | 11 | 22 | 3G3RX-A4075-E1F | |
| | 11 | 46 | 15 | 58 | | 11 | 25 | 15 | 29 | 3G3RX-A4110-E1F | |
| | 15 | 64 | 18.5 | 73 | | 15 | 32 | 18.5 | 37 | 3G3RX-A4150-E1F | |
| | 18.5 | 76 | 22 | 85 | | 18.5 | 38 | 22 | 43 | 3G3RX-A4185-E1F | |
| | 22 | 95 | 30 | 113 | | 22 | 48 | 30 | 57 | 3G3RX-A4220-E1F | |
| | 30 | 121 | 37 | 140 | | 30 | 58 | 37 | 70 | 3G3RX-A4300-E1F | |
| | 37 | 145 | 45 | 169 | | 37 | 75 | 45 | 85 | 3G3RX-A4370-E1F | |
| | 45 | 182 | 55 | 210 | | 45 | 91 | 55 | 105 | 3G3RX-A4450-E1F | |
| | 55 | 220 | 75 | 270 | | 55 | 112 | 75 | 135 | 3G3RX-A4550-E1F | |
| | - | | | | | 75 | 149 | 90 | 160 | 3G3RX-B4750-E1F | |
| | - | | | | | 90 | 176 | 110 | 195 | 3G3RX-B4900-E1F | |
| | - | | | | | 110 | 217 | 132 | 230 | 3G3RX-B411K-E1F | |
| | - | | | | | 132 | 260 | 160 | 290 | 3G3RX-B413K-E1F | |

① Line filters

| Rasmi line filter | | | | | | | | | |
|-----------------------------------|---------------|-------------------|-----------------|------|-----------------------------------|---------------|-------------------|-----------------|------|
| 200V | | | | | 400V | | | | |
| Model 3G3RX-□ | Reference | Rated current (A) | Leakage Nom/Max | kg | Model 3G3RX-□ | Reference | Rated current (A) | Leakage Nom/Max | kg |
| A2004/A2007/A2015/ A2022/A2037 | AX-FIR2018-RE | 18 | 0.7/40 mA | 2.0 | A4004/A4007/A4015/ A4022/A4040 | AX-FIR3010-RE | 10 | 0.3/40 mA | 1.9 |
| A2055/A2075/A2110 | AX-FIR2053-RE | 53 | 0.7/40 mA | 2.5 | A4055/A4075/A4110 | AX-FIR3030-RE | 30 | 0.3/40 mA | 2.2 |
| A2150/A2185/A2220 | AX-FIR2110-RE | 110 | 1.2/70 mA | 8.0 | A4150/A4185/A4220 | AX-FIR3053-RE | 53 | 0.8/70 mA | 4.5 |
| A2300 | AX-FIR2145-RE | 145 | 1.2/70 mA | 8.6 | A4300 | AX-FIR3064-RE | 64 | 3/160 mA | 7.0 |
| A2370/A2450 | AX-FIR3250-RE | 250 | 6/300 mA | 13.0 | A4370 | AX-FIR3100-RE | 100 | 2/130 mA | 8.0 |
| A2550 | AX-FIR3320-RE | 320 | 6/300 mA | 13.2 | A4450/A4550 | AX-FIR3130-RE | 130 | 2/130 mA | 8.6 |
| - | | | | | A4750/A4900 | AX-FIR3250-RE | 250 | 10/500 mA | 13.0 |
| | | | | | A411K/A413K | AX-FIR3320-RE | 320 | 10/500 mA | 13.2 |

① Input AC Reactors

| Voltage | | | |
|------------------------|----------------------|------------------------|----------------------|
| 3-phase 200 VAC | | 3-phase 400 VAC | |
| Inverter model 3G3RX-□ | AC reactor reference | Inverter model 3G3RX-□ | AC reactor reference |
| A2004/A2007/A2015 | AX-RAI02800100-DE | A4004/A4007/A4015 | AX-RAI07700050-DE |
| A2022/A2037 | AX-RAI00880200-DE | A4022/A4040 | AX-RAI03500100-DE |
| A2055/A2075 | AX-RAI00350335-DE | A4055/A4075 | AX-RAI01300170-DE |
| A2110/A2150 | AX-RAI00180670-DE | A4110/A4150 | AX-RAI00740335-DE |
| A2185/A2220 | AX-RAI00091000-DE | A4185/A4220 | AX-RAI00360500-DE |
| A2300/A2370 | AX-RAI00071550-DE | A4300/A4370 | AX-RAI00290780-DE |
| A2450/A2550 | AX-RAI00042300-DE | A4450/A4550 | AX-RAI00191150-DE |
| | | A4750/A4900 | AX-RAI00111850-DE |
| | | A411K/A413K | AX.RAI00072700-DE |

① DC Reactors

| Voltage | | | |
|------------------------|----------------------|------------------------|----------------------|
| 3-phase 200 VAC | | 3-phase 400 VAC | |
| Inverter model 3G3RX-□ | AC reactor reference | Inverter model 3G3RX-□ | AC reactor reference |
| A2004 | AX-RC10700032-DE | A4004 | AX-RC43000020-DE |
| A2007 | AX-RC06750061-DE | A4007 | AX-RC27000030-DE |
| A2015 | AX-RC03510093-DE | A4015 | AX-RC14000047-DE |
| A2022 | AX-RC02510138-DE | A4022 | AX-RC10100069-DE |
| A2037 | AX-RC01600223-DE | A4040 | AX-RC06400116-DE |
| A2055 | AX-RC01110309-DE | A4055 | AX-RC04410167-DE |
| A2075 | AX-RC00840437-DE | A4075 | AX-RC03350219-DE |
| A2110 | AX-RC00590614-DE | A4110 | AX-RC02330307-DE |
| A2150 | AX-RC00440859-DE | A4150 | AX-RC01750430-DE |
| A2185/A2220 | AX-RC00301275-DE | A4185/A4220 | AX-RC01200644-DE |
| A2300 | AX-RC00231662-DE | A4300 | AX-RC00920797-DE |
| A2370 | AX-RC00192015-DE | A4370 | AX-RC00741042-DE |
| A2450 | AX-RC00162500-DE | A4450 | AX-RC00611236-DE |
| A2550 | AX-RC00133057-DE | A4550 | AX-RC00501529-DE |
| | | A4750 | AX-RC00372094-DE |
| | | A4900 | AX-RC00312446-DE |
| | | A411K | AX-RC00252981-DE |
| | | A413K | AX-RC00213613-DE |

① Chokes

| Model | Diameter | Description | |
|---------------|----------|----------------------------|--|
| AX-FER2102-RE | 21 | For 2.2 kW motors or below | |
| AX-FER2515-RE | 25 | For 15 kW motors or below | |
| AX-FER5045-RE | 50 | For 45 kW motors or below | |
| AX-FER6055-RE | 60 | For 55 kW motors or above | |

① Output AC reactor

| Voltage | | | |
|---------------|-------------------|-------------------|-------------------|
| 200V | | 400V | |
| Model 3G3RX-□ | Reference | Model 3G3RX-□ | Reference |
| A2004 | AX-RAO11500026-DE | | |
| A2007 | AX-RAO07600042-DE | A4004/A4007/A4015 | AX-RAO16300038-DE |
| A2015 | AX-RAO04100075-DE | | |
| A2022 | AX-RAO03000105-DE | A4022 | AX-RAO11800053-DE |
| A2037 | AX-RAO01830160-DE | A4040 | AX-RAO07300080-DE |
| A2055 | AX-RAO01150220-DE | A4055 | AX-RAO04600110-DE |

| Voltage | | | |
|---------------|-------------------|---------------|-------------------|
| 200V | | 400V | |
| Model 3G3RX-□ | Reference | Model 3G3RX-□ | Reference |
| A2075 | AX-RAO00950320-DE | A4075 | AX-RAO03600160-DE |
| A2110 | AX-RAO00630430-DE | A4110 | AX-RAO02500220-DE |
| A2150 | AX-RAO00490640-DE | A4150 | AX-RAO02000320-DE |
| A2185 | AX-RAO00390800-DE | A4185 | AX-RAO01650400-DE |
| A2220 | AX-RAO00330950-DE | A4220 | AX-RAO01300480-DE |
| A2300 | AX-RAO00251210-DE | A4300 | AX-RAO01030580-DE |
| A2370 | AX-RAO00191450-DE | A4370 | AX-RAO00800750-DE |
| A2450 | AX-RAO00161820-DE | A4450 | AX-RAO00680900-DE |
| A2550 | AX-RAO00132200-DE | A4550 | AX-RAO00531100-DE |
| | | A4750 | AX-RAO00401490-DE |
| | | A4900 | AX-RAO00331760-DE |
| | | A411K | AX-RAO00262170-DE |
| | | A413K | AX-RAO00212600-DE |

Note: This table corresponds with HD rating. When ND is used, please choose the reactor for the next size inverter.

② Accessories

| Types | Appearance | Model | Description |
|-------------------------|------------|--------------------|--|
| Remote digital operator | | 3G3AX-OP05 | 5 Line LCD digital operator with copy function ^{*1} |
| | | 3G3AX-OP05-H-E | Operator holder (for inside cabinet mounting) |
| | | 3G3AX-OP01 | LED remote digital operator |
| | | 4X-KITmini | Mounting kit |
| LED digital operator | | 3G3AX-OP03 | To be used in combination with communication option boards |
| Blind cover | | 3G3AX-OP05-B-E | |
| Cables | | 3G3AX-CAJOP300-EE | 3 m remote digital operator cable |
| | - | USB-CONVERTERCABLE | RJ45 to USB connection cable |
| | | 3G3AX-PCACN2 | |

^{*1} This digital operator is provided with the RX inverter from factory.

③ Option boards

| Types | Model | Description | Functions |
|----------------------------|-----------------|---------------------------------|---|
| Encoder feedback | 3G3AX-PG | PG speed controller option card | Phase A,B and Z pulse (differential pulse) inputs (RS-422) Pulse train position command input (RS-422) Pulse monitor output (RS-422) PG frequency range: 100 kHz max |
| Communication option board | 3G3AX-RX-DRT | DeviceNet option card | Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current... through communications with the host controller. |
| | 3G3AX-RX-PRT | PROFIBUS option card | |
| | 3G3AX-RX-ECT | EtherCAT option card | |
| | 3G3AX-RX-CRT | CompoNet option card | |
| I/O option | 3G3AX-RX-MRT | MECHATROLINK-II option card | 8 digital inputs, 8 digital outputs, 4 analog inputs, 1 analog output |
| | 3G3AX-EIO21-ROE | Extra input/output option card | |

④ Braking unit, braking resistor unit

| Inverter | | | | | Braking resistor unit | | | | | | | | |
|--------------------------------|---------------|----------------------------|----------------------|-------------------------------|--|----------|------------------|--|----------|------------------|--|--|--|
| Voltage | Max. motor kW | Inverter 3G3RX□ 3-phase | Braking Unit AX-BCR□ | Connectable min. resistance Ω | Inverter mounted type (3%ED, 10 sec max) | | Braking torque % | External resistor 10%ED 10 sec max for built-in 5 sec max for Braking Unit | | Braking torque % | | | |
| | | | | | Type AX- | Resist Ω | | Type AX- | Resist Ω | | | | |
| 200 V (single-/three-phase) | 0.55 | 2004 | Built-in | 50 | REM00K1200-IE | 200 | 180 | REM00K1200-IE | 200 | 180 | | | |
| | 1.1 | 2007 | | | | | 100 | REM00K2070-IE | 70 | 200 | | | |
| | 1.5 | 2015 | | | REM00K2070-IE | 70 | 140 | REM00K4075-IE | 75 | 130 | | | |
| | 2.2 | 2022 | | | | | 90 | REM00K4035-IE | 35 | 180 | | | |
| | 4.0 | 2037 | | | REM00K4075-IE | 75 | 50 | REM00K6035-IE | 35 | 100 | | | |
| | 5.5 | 2055 | | | | | 75 | REM00K9020-IE | 20 | 150 | | | |
| | 7.5 | 2075 | | | REM00K4035-IE | 35 | 55 | REM01K9017-IE | 17 | 110 | | | |
| | 11.0 | 2110 | | | | | 40 | REM02K1017-IE | 17 | 75 | | | |
| | 15.0 | 2150 | | | REM00K9017-IE | 17 | 55 | REM03K5010-IE | 10 | 95 | | | |
| | 18.5 | 2185 | | | | | 75 | REM19K0008-IE | 8 | 95 | | | |
| | 22.0 | 2220 | | | REM03K5010-IE | 10 | 65 | | 80 | 80 | | | |
| | 30.0 | 2300 | 2035090-TE | 4 | | | | | 6 | 80 | | | |
| | 37.0 | 2370 | | | | | | | 6 | 60 | | | |
| | 45.0 | 2450 | | 2070130-TE | 2.8 | | | | 3 | 105 | | | |
| | 55.0 | 2550 | | | | | | | 3 | 85 | | | |
| 400 V (three-phase) | 0.55 | 4004 | Built-in | 100 | 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 | | | | | 130 | REM00K5120-IE | 120 | 200 | | | |
| | 4.0 | 4040 | | | REM00K2200-IE | 120 | 120 | REM00K6100-IE | 100 | 140 | | | |
| | 5.5 | 4055 | | | | | 140 | REM00K9070-IE | 70 | 150 | | | |
| | 7.5 | 4075 | | | REM00K4075-IE | 75 | 100 | REM01K9070-IE | 70 | 110 | | | |
| | 11.0 | 4110 | | | | | 50 | REM02K1070-IE | 70 | 75 | | | |
| | 15.0 | 4150 | | | REM00K9070-IE | 70 | 55 | REM03K5035-IE | 35 | 110 | | | |
| | 18.5 | 4185 | | | | | 90 | REM19K0030-IE | 30 | 100 | | | |
| | 22.0 | 4220 | | | REM03K5035-IE | 35 | 75 | | 85 | 85 | | | |
| | 30.0 | 4300 | 4015045-TE | 16 | | | 20 | | 95 | | | | |
| | 37.0 | 4370 | 4017068-TE | 11 | | | | | 15 | 125 | | | |
| | 45.0 | 4450 | | | | | | | 100 | 100 | | | |
| | 55.0 | 4550 | 4035090-TE | 8.5 | | | | | 10 | 100 | | | |
| | 75.0 | 4750 | | | | | | | 10 | 75 | | | |
| | 90.0 | 4900 | 4070130-TE | 5.5 | | | 6 | | 105 | | | | |
| | 110.0 | 411K | 4090240-TE | 3.2 | | | | | 4 | 125 | | | |
| | 132.0 | 413K | | | | | | | 4 | 105 | | | |

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.



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Motion & Drives

- Motion controllers
- Servo systems
- Inverters
- Robots

Control Components

- Temperature controllers
- Power supplies
- Timers
- Counters
- Programmable relays
- Digital panel indicators
- Electromechanical relays
- Monitoring products
- Solid-state relays
- Limit switches
- Pushbutton switches
- Low voltage switch gear

Sensing & Safety

- Photoelectric sensors
- Inductive sensors
- Capacitive & pressure sensors
- Cable connectors
- Displacement & width-measuring sensors
- Vision systems
- Safety networks
- Safety sensors
- Safety units/relay units
- Safety door/guard lock switches