



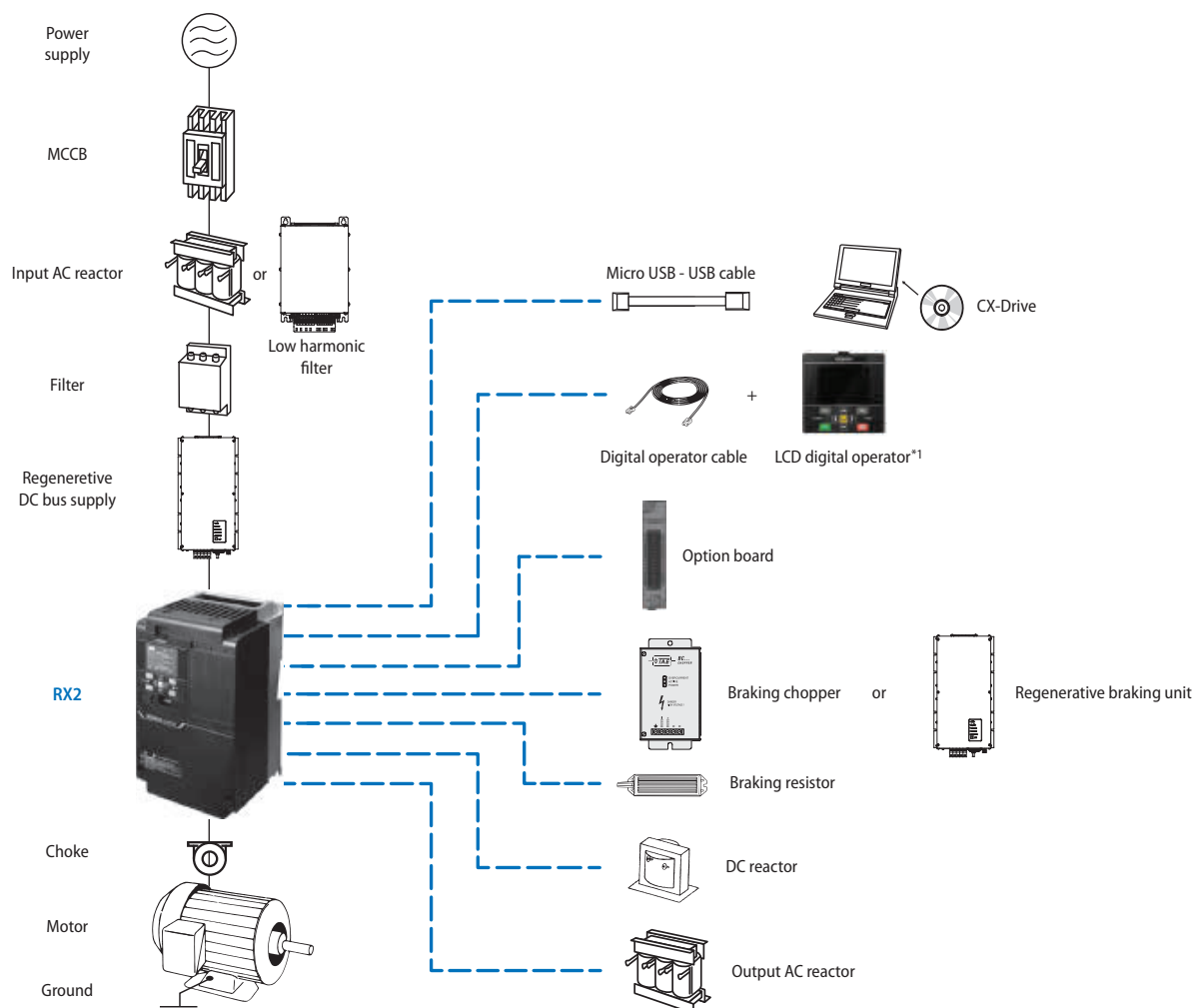
### The Driving Evolution

- High starting torque in open loop: 200% at 0.3 Hz, Full torque at 0 Hz in closed loop
- Sensor-less and vector closed-loop control
- Triple rating: VLD 110%/1min, LD 120%/1 min and ND 150%/1 min
- Built-in EMC filter, logic programming and application functionality
- Embedded STO safety function, SIL3/PLe/CAT 4
- IM & PM motor control
- Communication options: EtherCAT, PROFIBUS, PROFINET, Modbus TCP
- Regenerative solutions as option
- CE, CULus, RoHS

### Ratings

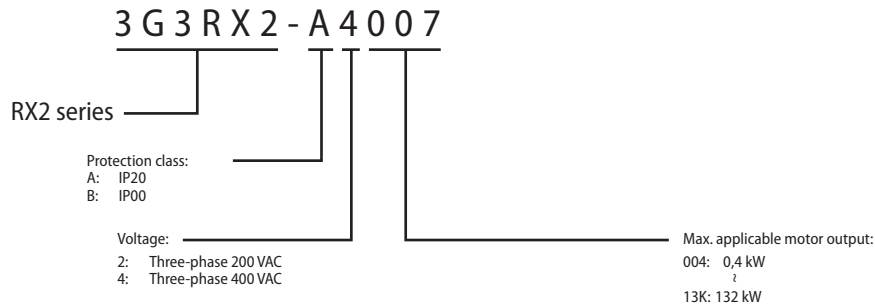
- 200 V class three-phase: 0.4 kW to 55 kW
- 400 V class three-phase: 0.75 kW to 132 kW

### System configuration



\*1 The LCD digital operator is provided with the drive from factory.

## Type designation



## Specifications

## Common specifications

| Item                                            |                                             |                          | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                     |
|-------------------------------------------------|---------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control mode (output to the motor)              |                                             |                          | Sine wave PWM control voltage output (line sine wave modulation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                     |
| Output frequency range *1                       |                                             |                          | 0.00 to 590.00 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                     |
| Frequency accuracy                              |                                             |                          | Digital command ±0.01% and analog command ±0.2% (25°C±10°C) against the maximum frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                     |
| Frequency resolution                            |                                             |                          | Digital setting: 0.01 Hz<br>Analog setting: maximum frequency/4000<br>(Ai1 terminal/Ai2 terminal: 12 bit/0 to +10 V or 0 to +20 mA, Ai3 terminal 12 bit/-10 to +10 V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                     |
| Control mode (frequency/voltage calculation) *2 |                                             |                          | IM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | V/f control (fixed torque/reduced torque/free), automatic boost control, cascade model sensorless vector control, 0 Hz range sensorless vector control, vector control with sensor. |
|                                                 |                                             |                          | SM/PMM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Synchronous starting sensorless vector control, IVMS starting smart sensorless vector control                                                                                       |
| Speed fluctuation *3                            |                                             |                          | ±0.5% (during sensorless vector control)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                     |
| Acceleration or deceleration time               |                                             |                          | 0.00 to 3600.00 sec (linear, S-shaped, U-shaped, reverse U-shaped, EL-S shaped)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                     |
| Display monitor                                 |                                             |                          | Output frequency, output current, output torque, trip history, I/O terminal status, I/O power *4, P-N voltage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                     |
| Starting functions                              |                                             |                          | Start after DC braking, frequency collection start, frequency entrainment start, reduced voltage start, retry start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                     |
| Stopping functions                              |                                             |                          | Free-run stop, DC braking after deceleration stop or terminal DC braking (braking power, operating speed adjustment)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                     |
| Stall prevention function                       |                                             |                          | Overload restraining function, overcurrent suppression function, overvoltage suppression function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                     |
| Protective function *5                          |                                             |                          | Overcurrent error, Motor overload error, Braking resistor Overload error, Overvoltage error, Memory error, Undervoltage error, Current detector error, CPU error, External trip error, USP error, Ground fault error, Incoming over voltage error, Instantaneous power failure error, Temperature detector error, Cooling fan rotation speed reduction temperature error, Temperature error, Input open-phase error, IGBT error, Output open-phase error, Thermistor error, Brake error, Low-speed range overload error, Controller overload error, RS485 communication error, Operator keypad disconnection error.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                     |
| Other functions                                 |                                             |                          | V/f free settings (7 points), Upper/lower limit frequency limiter, Frequency jump, Curve acceleration/deceleration, Manual torque boost, Energy-saving operation, Analog output adjustment function, Minimum frequency, Carrier frequency adjustment, Motor electronic thermal function (free setting is also possible), Drive electronic thermal function, External start/end (volume/ratio), Frequency input selection, Trip retry, Restart after instantaneous stop, Output of signals, Initialization settings, PID control, Automatic deceleration at power shut-off, Brake control function, and Auto-tuning for commercial switching function (online/offline).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                     |
| Input                                           | Frequency setting                           | Standard operator keypad | Parameter setting using arrow keys                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                     |
|                                                 |                                             | External signals *6      | Ai1/Ai2 terminal (when changing voltage)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Setting through input of 0 to 10 VDC voltage (input impedance: 10 kΩ)                                                                                                               |
|                                                 |                                             |                          | Ai1/Ai2 terminal (when changing current)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Setting through input of 0 to 20 mA current (input impedance: 100 Ω)                                                                                                                |
|                                                 |                                             |                          | Ai3 terminal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Setting through input of -10 to +10 V voltage (input impedance: 10 kΩ)                                                                                                              |
|                                                 |                                             |                          | Multistage speed terminal (use of input terminal function)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 15 speed                                                                                                                                                                            |
|                                                 |                                             |                          | Pulse string input (A/B terminal, use of input terminal function)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 32 kHz × 2 at maximum                                                                                                                                                               |
|                                                 |                                             | External port            | Setting via RS485 serial communication (protocol: Modbus-RTU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                     |
|                                                 | Normal rotation/ reverse rotation Run/ stop | Standard operator keypad | Execution with the RUN /STOP key (normal rotation/reverse rotation can be switched by setting parameters)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                     |
|                                                 |                                             | External signals         | Normal rotation operation (FW)/reverse rotation (RV) (when an input terminal function is assigned) 3-wire input available (when an input terminal function is assigned)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                     |
|                                                 |                                             | External port            | Setting via RS485 serial communication (protocol: Modbus-RTU (maximum: 115.2 kbps)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                     |
|                                                 | Input terminal function                     |                          | 11 terminals (input of pulse string is available on terminal A and B)<br>FW (Normal rotation)/RV (Reverse rotation), CF1-4 (Multistage speed 1-4), SF1-7 (Multistage speed bit 1-7), ADD (Addition of frequency), SCHG (Switching of frequency command), STA (3-wire start)/STP (3-wire stop)/F_R (3-wire normal/reverse), AHD (Retention of analog command), FUP (Increase of speed via remote operation)/FDN (Deceleration via remote operation), UDC (Deletion of data via remote operation), F-OP (Forced command switching), SET (Second control), RS (Reset), JG (Jogging), DB (External current braking), 2CH (2-stage acceleration/deceleration), FRS (Free-run stop), EXT (External abnormality), USP (Prevention of restart after restoration of power), CS (Commercial switching), SFT (Soft-lock), BOK (Brake check), OLR (Overload restriction switching), KHC (Clearance of integrated input power), OKHC (Clearance of integrated output power), PID (PID1 disabled), PIDC (PID1 integration reset), PID2 (PID2 disabled), PIDC2 (PID2 integration reset), SVC1-4 (PID1 multistage target values 1-4), PRO (PID gain switching), PIO (PID output switching), SLEP (SLEEP condition satisfied)/WAKE (WAKE condition satisfied), TL (Torque restriction enabled), TRQ1, 2 (Switching of torque limit 1, 2), PPI (Switching of P/PI control), CAS (Switching of control gain), FOC (Preparatory excitation), ATR (Torque control enabled), TBS (Torque bias enabled), LAC (Cancellation of acceleration/deceleration), Mi1-11 (General-purpose input 1-11), PCC (Clearance of pulse counter), ECOM (Start of EzCOM), PRG (Program run), HLD (Acceleration/deceleration stop), REN (Operation permission signal), PLA (Pulse string input A), and PLB (Pulse string input B) |                                                                                                                                                                                     |
|                                                 | Backup power supply terminal                |                          | P+/P-: DC24V input (allowable input voltage: 24 V±10%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                     |
|                                                 | STO input terminal                          |                          | 2 terminals (simultaneous input)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                     |
|                                                 | Thermistor input terminal                   |                          | 1 terminal (possible to switch between positive temperature coefficient/negative temperature coefficient resistance element)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                     |

| Item                                |                                       | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output                              | Output terminal function              | Transistor output 5 terminal, 1a contact relay 1 point, 1c contact relay 1 point                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                     | Relay and alarm relay (16, AL)        | RUN (During operation), FA1-5 (Reached signal), IRDY (Operation ready completion), FWR (During normal rotation operation), RVR (During reverse rotation operation), FREF (Frequency command operator keypad), REF (Operation command operator keypad), SETM (Second control under selection), AL (Alarm signal), MJA (Severe failure signal), OTQ (Over torque) <sup>*7</sup> , IP (During instantaneous power failure), UV (Under insufficient voltage), TRQ (During torque limitation), IPS (During power failure deceleration), RNT (RUN time over), ONT (Power on time over), THM (Electronic thermal warning), THC (Electronic thermal warning), WAC (Capacitor life advance notice), WAF (Fan life advance notice), FR (Operation command signal), OHF (Cooling fin heating advance notice), LOC/LOC2 (Low-current signal), OL/OL2 (Overload advance notice), BRK (Brake release), BER (Brake abnormality), ZS (Zero-speed detection signal), OD/OD2 (PID deviation excessive), FBV/FBV2 (PID feedback comparison), NDc (Communication disconnection), Ai1Dc/Ai2Dc/Ai3Dc (Analog disconnection Ai1/Ai2/Ai3), WCAi1/WCAi2/WCAi3 (Window comparator Ai1/Ai2/Ai3), LOG1-7 (Logical operation result 1-7), MO1-7 (General output 1-7), and OVS (Receiving overvoltage). |
|                                     | EDM output terminal                   | Output for STO diagnosis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     | Monitor output terminal <sup>*8</sup> | Possible to output through selection from monitor data of parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| EMC filter switching <sup>*9</sup>  |                                       | Possible to enable internal EMC filter. IEC61800-3 2nd Environment Category C3, 3 to 10 m motor cable length depending on model.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| External filter (AX-FIR____-SE)     |                                       | IEC61800-3 2nd Environment Category C1 up to 25 m and C2 up to 100 m motor cable length. Make sure internal filter is disabled.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| External access to PC               |                                       | USB Micro-B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Use environment                     | Ambient temperature <sup>*10</sup>    | ND (normal duty) -10 to 50°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                     |                                       | LD (low duty) -10 to 45°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                     |                                       | VLD (very low duty) -10 to 40°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | Storage temperature <sup>*11</sup>    | -20 to 65°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                     | Humidity                              | 20-90%RH (location free of condensation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     | Vibration <sup>*12</sup>              | 5.9 m/s <sup>2</sup> (0.6 G) 10 to 55 Hz: 3G3RX2-A2004 to A2220 / 3G3RX2-A4007 to A4220<br>2.94 m/s <sup>2</sup> (0.3 G) 10 to 55 Hz: 3G3RX2-A2300 to A2550 / 3G3RX2-A4300 to A413K                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Use location <sup>*13</sup>         |                                       | 1000 m altitude or lower (location free from corrosive gas, oil mist, and dust)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Expected Life time                  |                                       | Smoothing capacitor 10 years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                     |                                       | Designed life of cooling fan 10 years (models equipped with a cooling fan) free from dust                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                     |                                       | Memory element on the control circuit board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Applicable standards <sup>*14</sup> |                                       | Compliance with UL/cUL/CE standards, RCM, Functional Safety SIL3/PLe (to be obtained)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Painting color                      |                                       | Black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Operating, display                  |                                       | LCD Operator <sup>*15</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Number of option slots              |                                       | 3 ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Other options                       |                                       | Braking resistor, AC reactor, DC reactor, noise filter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

<sup>\*1</sup> The output frequency range depend on the control and motor used. When running the drive exceeding 60 Hz, check the maximum allowable frequency with the manufacturer of the motor.

<sup>\*2</sup> When the control mode is changed, unless the motor constant is appropriately configured, you cannot obtain the desired starting torque or the drive may trip.

<sup>\*3</sup> The variable range of motor speed may vary depending on your system or the environment where the motor is used. Please contact us for details.

<sup>\*4</sup> Both the input power and output power are reference values, which are not appropriate for use in calculation of efficiency values, etc. To obtain an accurate value, use an external device.

<sup>\*5</sup> The IGBT error [E030] is generated by the protective function not only for short circuit protection but also when IGBT is damaged. Depending on the operating conditions of the drive, the overcurrent error [E001] may occur, instead of the IGBT error.

<sup>\*6</sup> At the factory default setting, when voltage and current on Ai1/Ai2 terminal is changed using a switch, with input of voltage at 9.8 V and current at 19.8 mA, the maximum frequency is commanded. To change characteristics, make adjustments using the analog start/end function.

<sup>\*7</sup> The threshold for signal output varies depending on the motor to be combined with the drive, parameter adjustment, etc.

<sup>\*8</sup> The output data of analog voltage monitor and analog current monitor are reference values for connecting an analog meter. Due to the meter to be connected and variation in analog output circuit, the maximum output value may slightly vary from 10 V or 20 mA. To change characteristics, make adjustments using the Ao1 adjustment and Ao2 adjustment functions. Some monitor data cannot be output.

<sup>\*9</sup> To enable the EMC filter, connect with a power supply grounded at a neutral point. Otherwise, the leakage current may increase.

<sup>\*10</sup> Use the 400 V class drive at an input voltage of 500 VAC or below. If input voltage exceeds 500 VAC due to fluctuation of power, use the drive at 40°C or lower ambient temperature.

<sup>\*11</sup> The storage temperature is the temperature during transport.

<sup>\*12</sup> To be in accordance with the testing method specified in JIS C 60068-2-6: 2010 (IEC 60068-2-6:2007)

<sup>\*13</sup> When the drive is used in a location at 1000 m or higher altitude, air pressure reduces approximately 1% every 100 m elevation. Perform 1% current derating and conduct evaluation for every 100 m elevation.

<sup>\*14</sup> For insulation distance, comply with UL and CE standards

<sup>\*15</sup> When a clock function is used, the optional battery (CR2032, 3 V) is required. When you purchase, this LCD operator does not come with the battery.

## 3G3RX2 200 V class

Very Low Duty (VLD)/Low Duty (LD)/Normal Duty (ND)

| 3G3RX2-□□□□□                                    |                                                     | A2004                                                                        | A2007                                                                                                                                                                                                  | A2015 | A2022 | A2037 | A2055 | A2075 | A2110 | A2150 | A2185 | A2220 | A2300                                          | A2370 | A2450 | A2550 |       |       |
|-------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------------------------------|-------|-------|-------|-------|-------|
| Applicable motor<br>(4-pole) capacity (kW)      |                                                     | VLD                                                                          | 0.75                                                                                                                                                                                                   | 1.5   | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22    | 30                                             | 37    | 45    | 55    | 75    |       |
|                                                 |                                                     | LD                                                                           | 0.75                                                                                                                                                                                                   | 1.5   | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22    | 30                                             | 37    | 45    | 55    | 75    |       |
|                                                 |                                                     | ND                                                                           | 0.4                                                                                                                                                                                                    | 0.75  | 1.5   | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22                                             | 30    | 37    | 45    | 55    |       |
| Output                                          | Rated output current (A)                            | VLD                                                                          | 4.4                                                                                                                                                                                                    | 8.0   | 10.4  | 15.6  | 22.8  | 33.0  | 46.0  | 60.0  | 80.0  | 93.0  | 124                                            | 153   | 185   | 229   | 295   |       |
|                                                 |                                                     | LD                                                                           | 3.7                                                                                                                                                                                                    | 6.3   | 9.4   | 12.0  | 19.6  | 30.0  | 40.0  | 56.0  | 73.0  | 85.0  | 113                                            | 140   | 169   | 210   | 270   |       |
|                                                 |                                                     | ND                                                                           | 3.2                                                                                                                                                                                                    | 5.0   | 8.0   | 11.0  | 17.5  | 25.0  | 32.0  | 46.0  | 64.0  | 76.0  | 95.0                                           | 122   | 146   | 182   | 220   |       |
|                                                 | Overload current rating                             | VLD                                                                          | 110% 60 sec / 120% 3 sec                                                                                                                                                                               |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 |                                                     | LD                                                                           | 120% 60 sec / 150% 3 sec                                                                                                                                                                               |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 |                                                     | ND                                                                           | 150% 60 sec / 200% 3 sec                                                                                                                                                                               |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 | Rated output voltage                                |                                                                              | 3-phase (3-wire) 200 to 240 V (depending on receiving voltage)                                                                                                                                         |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 | Rated capacity (kVA)                                | 200 V                                                                        | VLD                                                                                                                                                                                                    | 1.5   | 2.8   | 3.6   | 5.4   | 7.9   | 11.4  | 15.9  | 20.8  | 27.7  | 32.2                                           | 43.0  | 53.0  | 64.1  | 79.3  | 102.2 |
|                                                 |                                                     |                                                                              | LD                                                                                                                                                                                                     | 1.3   | 2.2   | 3.3   | 4.2   | 6.8   | 10.4  | 13.9  | 19.4  | 25.3  | 29.4                                           | 39.1  | 48.5  | 58.5  | 72.7  | 93.5  |
|                                                 |                                                     |                                                                              | ND                                                                                                                                                                                                     | 1.1   | 1.7   | 2.8   | 3.8   | 6.1   | 8.7   | 11.1  | 15.9  | 22.2  | 26.3                                           | 32.9  | 42.3  | 50.6  | 63.0  | 76.2  |
| 240 V                                           |                                                     | VLD                                                                          | 1.8                                                                                                                                                                                                    | 3.3   | 4.3   | 6.5   | 9.5   | 13.7  | 19.1  | 24.9  | 33.3  | 38.7  | 51.5                                           | 63.6  | 76.9  | 95.2  | 122.6 |       |
|                                                 |                                                     | LD                                                                           | 1.5                                                                                                                                                                                                    | 2.6   | 3.9   | 5.0   | 8.1   | 12.5  | 16.6  | 23.3  | 30.3  | 35.3  | 47.0                                           | 58.2  | 70.3  | 87.3  | 112.2 |       |
|                                                 |                                                     | ND                                                                           | 1.3                                                                                                                                                                                                    | 2.1   | 3.3   | 4.6   | 7.3   | 10.4  | 13.3  | 19.1  | 26.6  | 31.6  | 39.5                                           | 50.7  | 60.7  | 75.7  | 91.5  |       |
| Input                                           | Rated input current (A) <sup>*1</sup>               | VLD                                                                          | 5.2                                                                                                                                                                                                    | 9.5   | 12.4  | 18.6  | 27.1  | 39.3  | 54.8  | 71.4  | 95.2  | 110.7 | 147.6                                          | 182.1 | 220.2 | 272.6 | 351.2 |       |
|                                                 |                                                     | LD                                                                           | 4.4                                                                                                                                                                                                    | 7.5   | 11.2  | 14.3  | 23.3  | 35.7  | 47.6  | 66.7  | 86.9  | 101.2 | 134.5                                          | 166.7 | 201.2 | 250.0 | 321.4 |       |
|                                                 |                                                     | ND                                                                           | 3.8                                                                                                                                                                                                    | 6.0   | 9.5   | 13.1  | 20.8  | 29.8  | 38.1  | 54.8  | 76.2  | 90.5  | 113.1                                          | 145.2 | 173.8 | 216.7 | 261.9 |       |
|                                                 | Rated input AC voltage                              |                                                                              | Control power supply: Power supply single phase 200 to 240 V/allowable variation range 170 to 264 V, 50 Hz (allowable variation range: 47.5 to 52.5 Hz)/60 Hz (allowable variation range: 57 to 63 Hz) |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 |                                                     |                                                                              | Main circuit power supply: 3-phase (3-wire) 200 to 240 V/allowable variation range 170 to 264 V, 50 Hz (allowable variation range: 47.5 to 52.5 Hz)/60 Hz (allowable variation range: 57 to 63 Hz)     |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 | Power supply equipment capacity (kVA) <sup>*2</sup> | VLD                                                                          | 2.0                                                                                                                                                                                                    | 3.6   | 4.7   | 7.1   | 10.3  | 15.0  | 20.9  | 27.2  | 36.3  | 42.2  | 56.3                                           | 69.4  | 83.9  | 103.9 | 133.8 |       |
|                                                 |                                                     | LD                                                                           | 1.7                                                                                                                                                                                                    | 2.9   | 4.3   | 5.4   | 8.9   | 13.6  | 18.1  | 25.4  | 33.1  | 38.6  | 51.3                                           | 63.5  | 76.7  | 95.3  | 122.5 |       |
| ND                                              |                                                     | 1.5                                                                          | 2.3                                                                                                                                                                                                    | 3.6   | 5.0   | 7.9   | 11.3  | 14.5  | 20.9  | 29.0  | 34.5  | 43.1  | 55.3                                           | 66.2  | 82.6  | 99.8  |       |       |
| Carrier frequency operating range <sup>*3</sup> |                                                     | VLD                                                                          | 0.5 to 10.0 kHz                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 |                                                     | LD                                                                           | 0.5 to 12.0 kHz                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
|                                                 |                                                     | ND                                                                           | 0.5 to 16.0 kHz                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
| Motor start torque <sup>*4</sup>                |                                                     | 200%/0.3 Hz                                                                  |                                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
| Braking                                         | Regenerative braking                                | Equipped with BRD circuit (with a discharging resistor separately installed) |                                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       | Regenerative braking unit separately installed |       |       |       |       |       |
|                                                 | Minimum resistance that can be connected (Ω)        | 50                                                                           | 50                                                                                                                                                                                                     | 35    | 35    | 35    | 16    | 10    | 10    | 7.5   | 7.5   | 5     | ---                                            | ---   | ---   | ---   |       |       |
| Dimension                                       | Height (mm)                                         | 255                                                                          | 255                                                                                                                                                                                                    | 255   | 255   | 255   | 260   | 260   | 260   | 390   | 390   | 390   | 540                                            | 550   | 550   | 700   |       |       |
|                                                 | Width (mm)                                          | 150                                                                          | 150                                                                                                                                                                                                    | 150   | 150   | 150   | 210   | 210   | 210   | 245   | 245   | 245   | 300                                            | 390   | 390   | 480   |       |       |
|                                                 | Depth (mm)                                          | 140                                                                          | 140                                                                                                                                                                                                    | 140   | 140   | 140   | 170   | 170   | 170   | 190   | 190   | 190   | 195                                            | 250   | 250   | 250   |       |       |
| Protection class                                |                                                     | IP20 <sup>*5</sup> / UL open type                                            |                                                                                                                                                                                                        |       |       |       |       |       |       |       |       |       |                                                |       |       |       |       |       |
| Approximate mass (kg)                           |                                                     | 3                                                                            | 3                                                                                                                                                                                                      | 3     | 3     | 3     | 6     | 6     | 6     | 10    | 10    | 10    | 22                                             | 33    | 33    | 47    |       |       |

\*1 The rated input currents shown in the table are the values when the rated current is output. The values vary depending on impedance on the power supply (wiring, breaker, input reactor option, etc.)

\*2 The power supply equipment capacities shown in the table are the values when 220 V rated current is output. The values vary depending on impedance on the power supply (wiring, breaker, input reactor option, etc.)

\*3 The setting of rated values for carrier frequencies [bb101]/[bb201] are internally limited in accordance with the description. Also, it is recommended to set values equivalent to or above (maximum output frequency for driving ×10) Hz for the setting of carrier frequencies [bb101]/[bb201]. Also, in the case of induction motor (IM) control, for items other than those subject to V/f control, it is recommended to set carrier frequency at 2 kHz or more. In the case of synchronous motor (SM)/permanent magnet motor (PMM) control, it is recommended to set carrier frequency at 8 kHz or more.

\*4 The value of the sensor-less vector control applied to the ND rating in the Standard motor. Torque characteristics may vary depending on the control method and the motor used.

\*5 Based on self declaration.

## 3G3RX2 400 V class

Very Low Duty (VLD)/Low Duty (LD)/Normal Duty (ND)

| 3G3RX2-□□□□□□                              |                                                 | A4007                                                                                          | A4015                                                                                                                                                                                                                                                                                                                                                                                                                      | A4022 | A4037 | A4055 | A4075 | A4110 | A4150 | A4185 | A4220 | A4300 | A4370 | A4450                                          | A4550           | B4750 | B4900 | B411K | B413K |       |       |
|--------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------------------------------|-----------------|-------|-------|-------|-------|-------|-------|
| Applicable motor<br>(4-pole) capacity (kW) |                                                 | VLD                                                                                            | 1.5                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22    | 30    | 37    | 45                                             | 55              | 75    | 90    | 110   | 132   | 160   |       |
|                                            |                                                 | LD                                                                                             | 1.5                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22    | 30    | 37    | 45                                             | 55              | 75    | 90    | 110   | 132   | 160   |       |
|                                            |                                                 | ND                                                                                             | 0.75                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.5   | 2.2   | 3.7   | 5.5   | 7.5   | 11    | 15    | 18.5  | 22    | 30    | 37                                             | 45              | 55    | 75    | 90    | 110   | 132   |       |
| Output                                     | Rated output<br>current (A)                     | VLD                                                                                            | 4.1                                                                                                                                                                                                                                                                                                                                                                                                                        | 5.4   | 8.3   | 12.6  | 17.5  | 25.0  | 31.0  | 40.0  | 47.0  | 62.0  | 77.0  | 93.0                                           | 116             | 147   | 176   | 213   | 252   | 316   |       |
|                                            |                                                 | LD                                                                                             | 3.1                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.8   | 6.7   | 11.1  | 16.0  | 22.0  | 29.0  | 37.0  | 43.0  | 57.0  | 70.0  | 85.0                                           | 105             | 135   | 160   | 195   | 230   | 290   |       |
|                                            |                                                 | ND                                                                                             | 2.5                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.0   | 5.5   | 9.2   | 14.8  | 19.0  | 25.0  | 32.0  | 39.0  | 48.0  | 61.0  | 75.0                                           | 91.0            | 112   | 150   | 180   | 217   | 260   |       |
|                                            | Overload current<br>rating                      | VLD                                                                                            | 110% 60 sec / 120% 3 sec                                                                                                                                                                                                                                                                                                                                                                                                   |       |       |       |       |       |       |       |       |       |       |                                                |                 |       |       |       |       |       |       |
|                                            |                                                 | LD                                                                                             | 120% 60 sec / 150% 3 sec                                                                                                                                                                                                                                                                                                                                                                                                   |       |       |       |       |       |       |       |       |       |       |                                                |                 |       |       |       |       |       |       |
|                                            |                                                 | ND                                                                                             | 150% 60 sec / 200% 3 sec                                                                                                                                                                                                                                                                                                                                                                                                   |       |       |       |       |       |       |       |       |       |       |                                                |                 |       |       |       |       |       |       |
|                                            | Rated output voltage                            |                                                                                                | 3-phase (3-wire) 380 to 500 V (depending on receiving voltage)                                                                                                                                                                                                                                                                                                                                                             |       |       |       |       |       |       |       |       |       |       |                                                |                 |       |       |       |       |       |       |
|                                            | Rated capacity<br>(kVA)                         | 400 V                                                                                          | VLD                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.8   | 3.7   | 5.8   | 8.7   | 12.1  | 17.3  | 21.5  | 27.7  | 32.6  | 43.0  | 53.3                                           | 64.4            | 80.4  | 101.8 | 121.9 | 147.6 | 174.6 | 218.9 |
|                                            |                                                 |                                                                                                | LD                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.1   | 3.3   | 4.6   | 7.7   | 11.1  | 15.2  | 20.1  | 25.6  | 29.8  | 39.5  | 48.5                                           | 58.9            | 72.7  | 93.5  | 110.9 | 135.1 | 159.3 | 200.9 |
|                                            |                                                 |                                                                                                | ND                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.7   | 2.8   | 3.8   | 6.4   | 10.3  | 13.2  | 17.3  | 22.2  | 27.0  | 33.3  | 42.3                                           | 52.0            | 63.0  | 77.6  | 103.9 | 124.7 | 150.3 | 180.1 |
|                                            |                                                 | 500 V                                                                                          | VLD                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.6   | 4.7   | 7.2   | 10.9  | 15.2  | 21.7  | 26.8  | 34.6  | 40.7  | 53.7  | 66.7                                           | 80.5            | 100.5 | 127.3 | 152.4 | 184.5 | 218.2 | 273.7 |
|                                            |                                                 |                                                                                                | LD                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.7   | 4.2   | 5.8   | 9.6   | 13.9  | 19.1  | 25.1  | 32.0  | 37.2  | 49.4  | 60.6                                           | 73.6            | 90.9  | 116.9 | 138.6 | 168.9 | 199.2 | 251.1 |
|                                            |                                                 |                                                                                                | ND                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.2   | 3.5   | 4.8   | 8.0   | 12.8  | 16.5  | 21.7  | 27.7  | 33.8  | 41.6  | 52.8                                           | 65.0            | 78.8  | 97.0  | 129.9 | 155.9 | 187.9 | 225.2 |
| Input                                      | Rated input current<br>(A) *1                   | VLD                                                                                            | 4.9                                                                                                                                                                                                                                                                                                                                                                                                                        | 6.4   | 9.9   | 15.0  | 20.8  | 29.8  | 36.9  | 47.6  | 56.0  | 73.8  | 91.7  | 110.7                                          | 138.1           | 175.0 | 209.5 | 253.6 | 300.0 | 376.2 |       |
|                                            |                                                 | LD                                                                                             | 3.7                                                                                                                                                                                                                                                                                                                                                                                                                        | 5.7   | 8.0   | 13.2  | 19.0  | 26.2  | 34.5  | 44.0  | 51.2  | 67.9  | 83.3  | 101.2                                          | 125.0           | 160.7 | 190.5 | 232.1 | 273.8 | 345.2 |       |
|                                            |                                                 | ND                                                                                             | 3.0                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.8   | 6.5   | 11.0  | 17.6  | 22.6  | 29.8  | 38.1  | 46.4  | 57.1  | 72.6  | 89.3                                           | 108.3           | 133.3 | 178.6 | 214.3 | 258.3 | 309.5 |       |
|                                            | Rated input AC voltage                          |                                                                                                | Control power supply: Power supply single phase 380 to 500 V (allowable variation range 323 to 550 V),<br>50 Hz (allowable variation range: 47.5 to 52.5 Hz)/60 Hz (allowable variation range: 57 to 63 Hz)<br><br>Main circuit power supply: 3-phase (3-wire) 380 to 500 V (allowable variation range) 323 to 550 V,<br>50 Hz (allowable variation range: 47.5 to 52.5 Hz)/60 Hz (allowable variation range: 57 to 63 Hz) |       |       |       |       |       |       |       |       |       |       |                                                |                 |       |       |       |       |       |       |
|                                            | Power supply<br>equipment<br>capacity (kVA) *2  | VLD                                                                                            | 3.7                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.9   | 7.5   | 11.4  | 15.9  | 22.7  | 28.1  | 36.3  | 42.6  | 56.3  | 69.9  | 84.4                                           | 105.2           | 133.4 | 159.7 | 193.2 | 228.6 | 286.7 |       |
|                                            |                                                 | LD                                                                                             | 2.8                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.4   | 6.1   | 10.1  | 14.5  | 20.0  | 26.3  | 33.6  | 39.0  | 51.7  | 63.5  | 77.1                                           | 95.3            | 122.5 | 145.2 | 176.9 | 208.7 | 263.1 |       |
|                                            |                                                 | ND                                                                                             | 2.3                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.6   | 5.0   | 8.3   | 13.4  | 17.2  | 22.7  | 29.0  | 35.4  | 43.5  | 55.3  | 68.0                                           | 82.6            | 101.6 | 136.1 | 163.3 | 196.9 | 235.9 |       |
| Carrier frequency<br>range *3              |                                                 | VLD                                                                                            | 0.5 to 10.0 kHz                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       |                                                | 0.5 to 8.0 kHz  |       |       |       |       |       |       |
|                                            |                                                 | LD                                                                                             | 0.5 to 12.0 kHz                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       |                                                | 0.5 to 8.0 kHz  |       |       |       |       |       |       |
|                                            |                                                 | ND                                                                                             | 0.5 to 16.0 kHz                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       |                                                | 0.5 to 10.0 kHz |       |       |       |       |       |       |
| Motor start torque *4                      |                                                 | 200%/0.3 Hz                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       | 180%/0.3 Hz                                    |                 |       |       |       |       |       |       |
| Braking                                    | Regenerative braking                            | Equipped with braking resistance circuit<br>(with a discharging resistor separately installed) |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       | Regenerative braking unit separately installed |                 |       |       |       |       |       |       |
|                                            | Minimum resistance that<br>can be connected (Ω) | 100                                                                                            | 100                                                                                                                                                                                                                                                                                                                                                                                                                        | 100   | 70    | 70    | 35    | 35    | 24    | 24    | 20    | 15    | 15    | 10                                             | 10              | ---   | ---   | ---   | ---   |       |       |
| Dimension                                  | Height (mm)                                     | 255                                                                                            | 255                                                                                                                                                                                                                                                                                                                                                                                                                        | 255   | 255   | 260   | 260   | 260   | 390   | 390   | 390   | 540   | 550   | 550                                            | 550             | 700   | 700   | 740   | 740   |       |       |
|                                            | Width (mm)                                      | 150                                                                                            | 150                                                                                                                                                                                                                                                                                                                                                                                                                        | 150   | 150   | 210   | 210   | 210   | 245   | 245   | 245   | 300   | 390   | 390                                            | 390             | 390   | 390   | 480   | 480   |       |       |
|                                            | Depth (mm)                                      | 140                                                                                            | 140                                                                                                                                                                                                                                                                                                                                                                                                                        | 140   | 140   | 170   | 170   | 170   | 190   | 190   | 190   | 195   | 250   | 250                                            | 250             | 270   | 270   | 270   | 270   |       |       |
| Protection class                           |                                                 | IP20 *5 / UL open type                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |       |       |       |       |       |       |       |       | IP00 / UL open type                            |                 |       |       |       |       |       |       |
| Approximate mass (kg)                      |                                                 | 3                                                                                              | 3                                                                                                                                                                                                                                                                                                                                                                                                                          | 3     | 3     | 6     | 6     | 6     | 8.5   | 8.5   | 8.5   | 22    | 31    | 31                                             | 31              | 41    | 41    | 53    | 53    |       |       |

\*1 The rated input currents shown in the table are the values when the rated current is output. The values vary depending on impedance on the power supply (wiring, breaker, input reactor option, etc.)

\*2 The power supply equipment capacities shown in the table are the values when 220 V rated current is output. The values vary depending on impedance on the power supply (wiring, breaker, input reactor option, etc.)

\*3 The setting of rated values for carrier frequencies [bb101]/[bb201] are internally limited in accordance with the description. Also, it is recommended to set values equivalent to or above (maximum output frequency for driving  $\times 10$  Hz for the setting of carrier frequencies [bb101]/[bb201]). Also, in the case of induction motor (IM) control, for items other than those subject to V/f control, it is recommended to set carrier frequency at 2 kHz or more. In the case of synchronous motor (SM)/permanent magnet motor (PMM) control, it is recommended to set carrier frequency at 8 kHz or more.

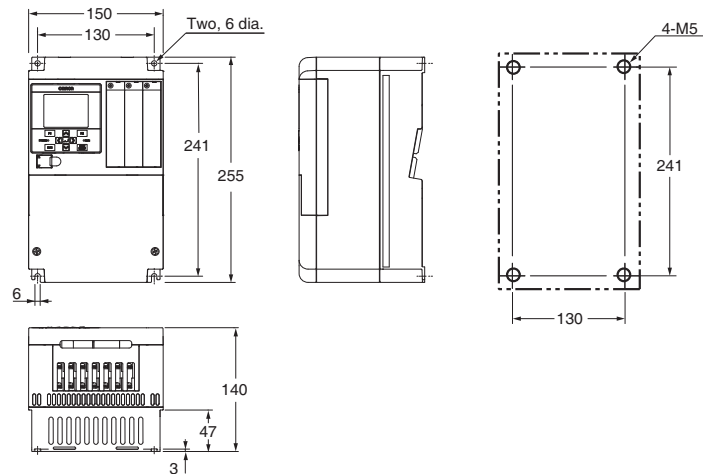
\*4 The value of the sensor-less vector control applied to the ND rating in the Standard motor. Torque characteristics may vary depending on the control method and the motor used.

\*5 Based on self declaration.

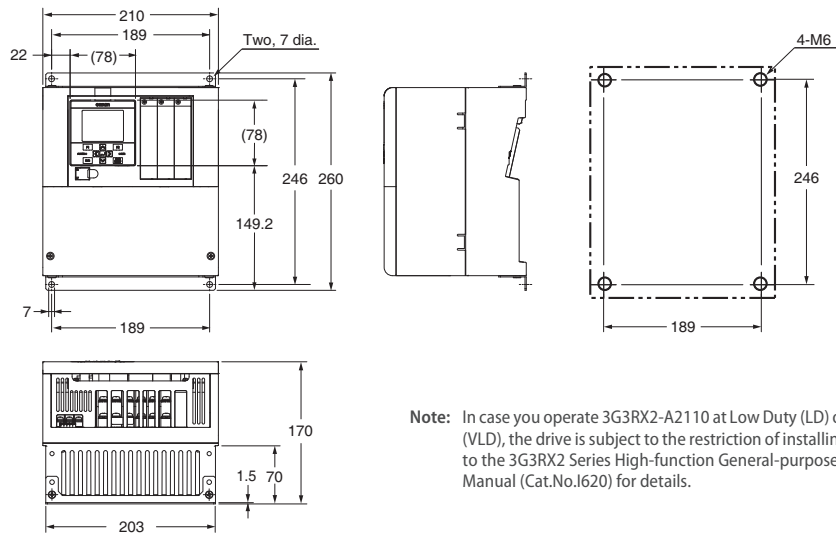
## Dimensions

### 3G3RX2 drive

3G3RX2-A2004/A2007/A2015/A2022/A2037  
3G3RX2-A4007/A4015/A4022/A4037

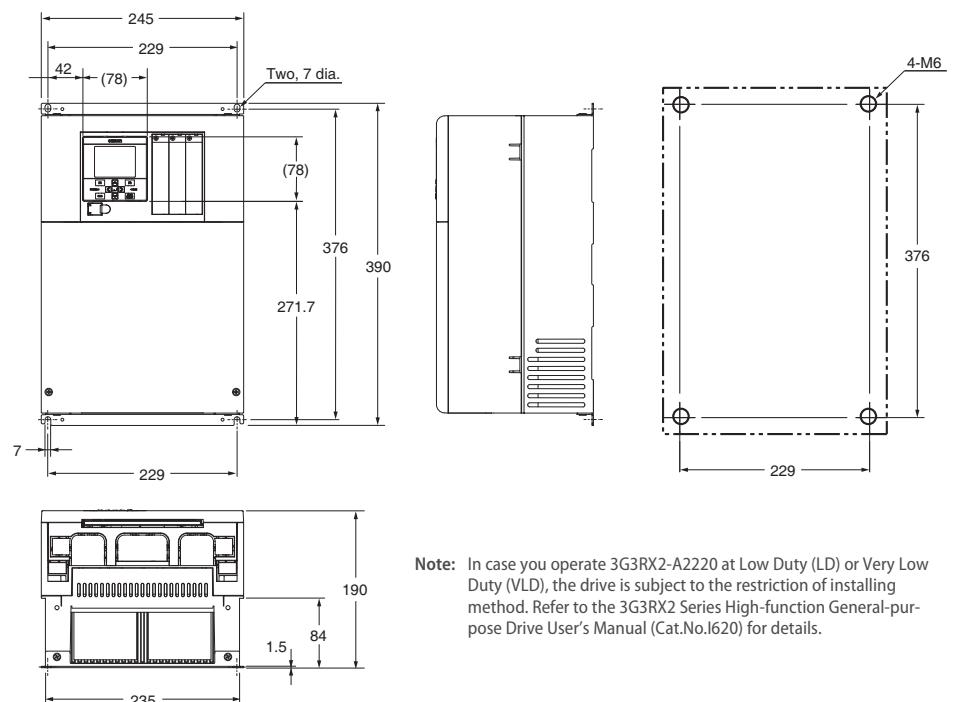


3G3RX2-A2055/A2075/A2110  
3G3RX2-A4055/A4075/A4110



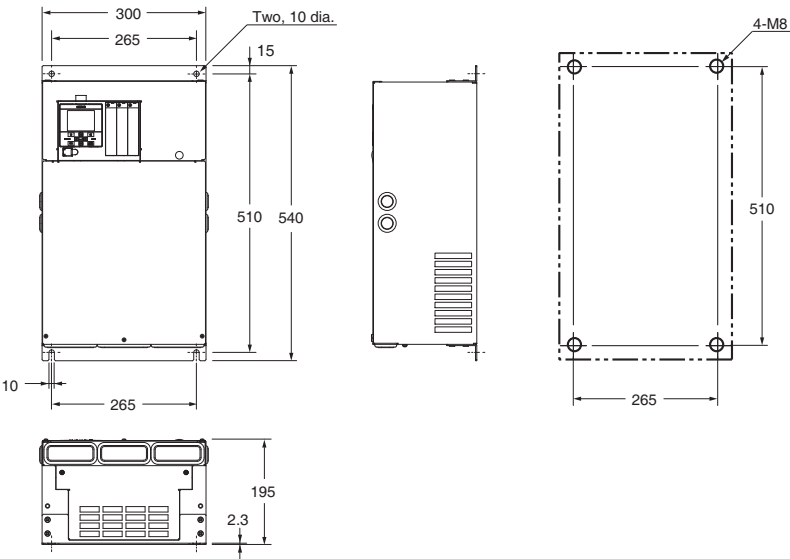
**Note:** In case you operate 3G3RX2-A2110 at Low Duty (LD) or Very Low Duty (VLD), the drive is subject to the restriction of installing method. Refer to the 3G3RX2 Series High-function General-purpose Drive User's Manual (Cat.No.I620) for details.

3G3RX2-A2150/A2185/A2220  
3G3RX2-A4150/A4185/A4220

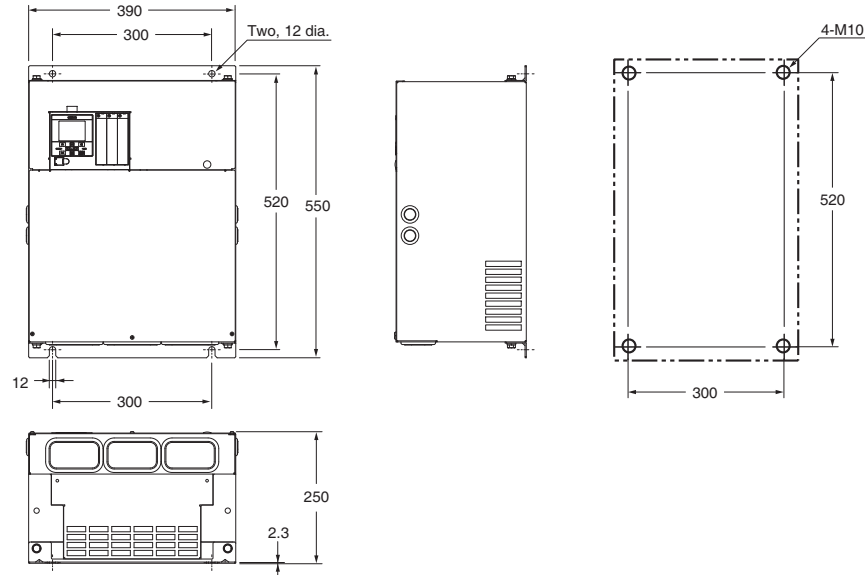


**Note:** In case you operate 3G3RX2-A2220 at Low Duty (LD) or Very Low Duty (VLD), the drive is subject to the restriction of installing method. Refer to the 3G3RX2 Series High-function General-purpose Drive User's Manual (Cat.No.I620) for details.

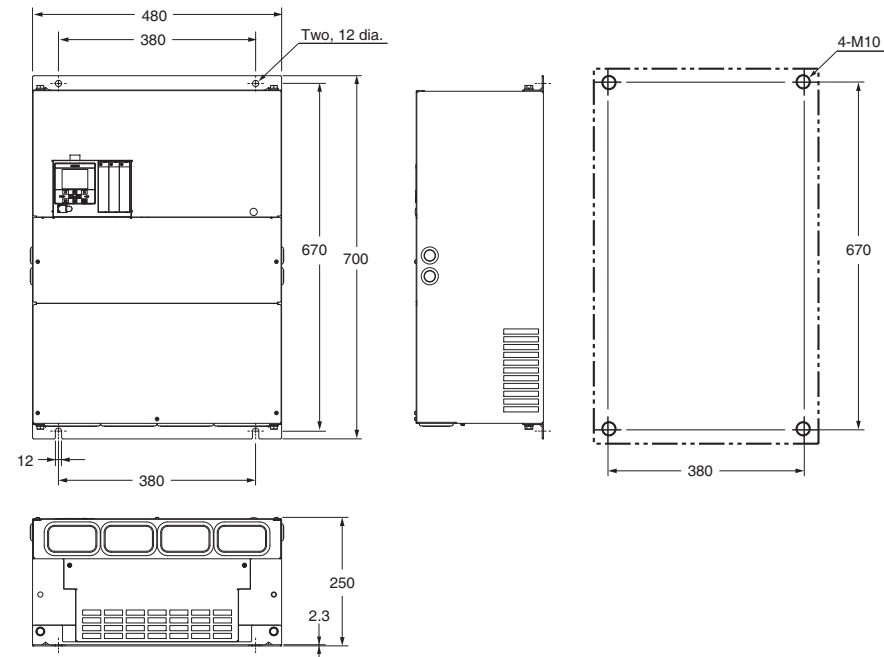
3G3RX2-A2300  
3G3RX2-A4300



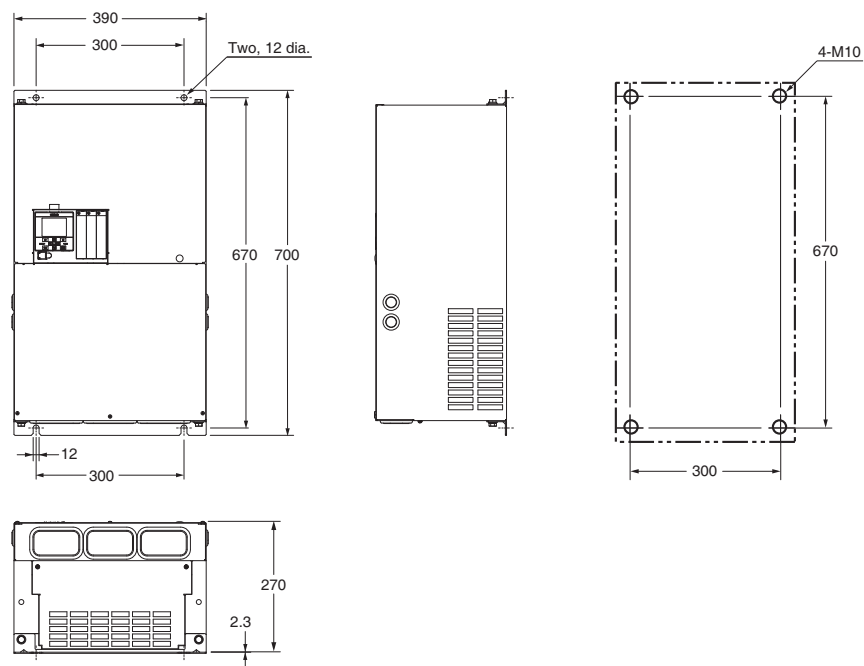
3G3RX2-A2370/A2450  
3G3RX2-A4370/A4450/A4550



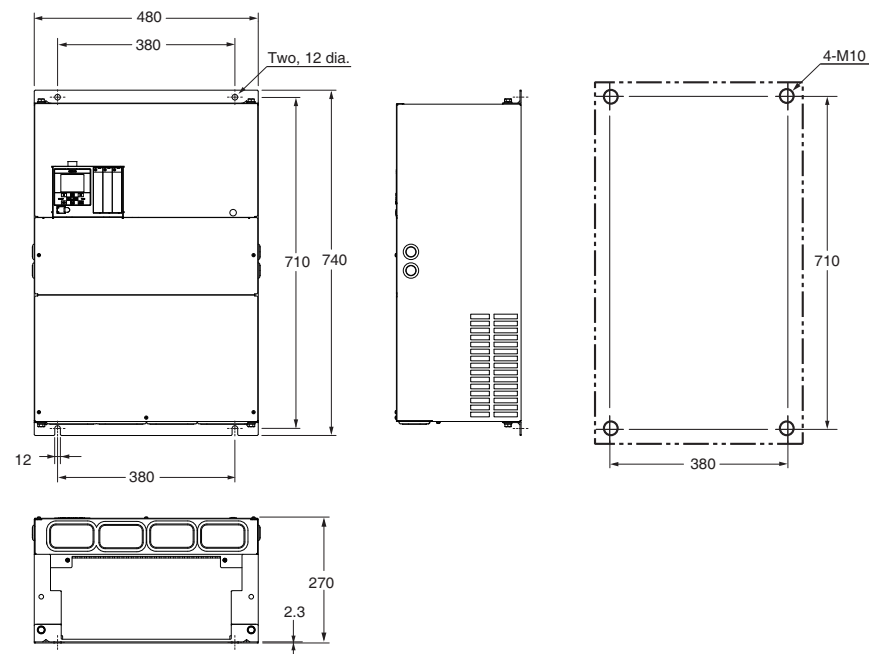
3G3RX2-A2550



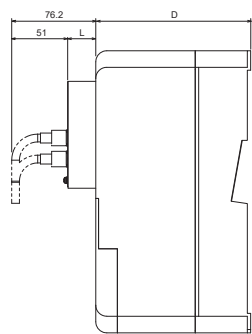
3G3RX2-B4750/B4900



3G3RX2-B411K/B413K



Option board



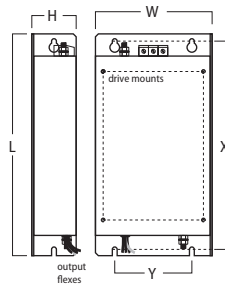
| Model                                | L (mm) |
|--------------------------------------|--------|
| PG speed controller (3G3AX-RX2-PG01) | 47     |
| PROFIBUS (P1-PB)                     | 31.3   |
| PROFINET (P1-PN)                     | 31.3   |
| Modbus TCP (P1-EN)                   | 33     |
| EtherCAT (3G3AX-RX2-ECT)             | 25.2   |

**Note:**The dimension D differs depending on the capacity of the drive.

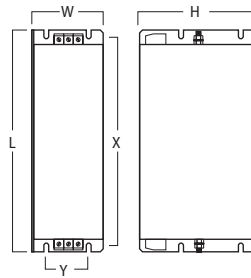
## Accessories

## Schaffner filters

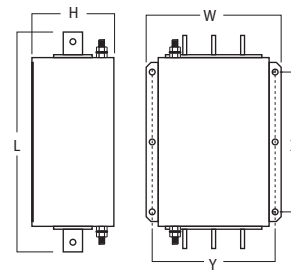
Footprint dimensions



Book type dimensions

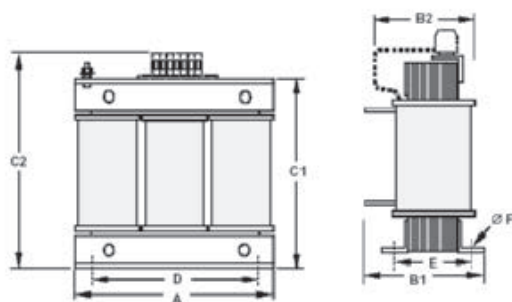


Block type dimensions



| Voltage class | Drive model  | Schaffner model | Filter type  | Dimensions in mm |     |     |     |     |    |             |
|---------------|--------------|-----------------|--------------|------------------|-----|-----|-----|-----|----|-------------|
|               |              |                 |              | L                | W   | H   | X   | Y   | M  | Weight (kg) |
| 3-phase 200 V | 3G3RX2-A2004 | AX-FIR2021-SE   | Footprint    | 300              | 152 | 52  | 284 | 120 | M5 | 1.5         |
|               | 3G3RX2-A2007 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2015 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2022 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2037 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2055 | AX-FIR2055-SE   | Footprint    | 306              | 213 | 56  | 290 | 170 | M6 | 2.5         |
|               | 3G3RX2-A2075 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2110 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2150 | AX-FIR2114-SE   | Footprint    | 436              | 248 | 90  | 421 | 200 | M6 | –           |
|               | 3G3RX2-A2185 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2220 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2300 | AX-FIR4146-SE   | Book         | 310              | 100 | 225 | –   | 70  | –  | 6.6         |
|               | 3G3RX2-A2370 | AX-FIR4310-SE   | Block        | 386              | 260 | 115 | 240 | 235 | –  | 9.5         |
|               | 3G3RX2-A2450 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A2550 |                 |              |                  |     |     |     |     |    |             |
| 3-phase 400 V | 3G3RX2-A4007 | AX-FIR4011-SE   | Footprint    | 300              | 152 | 52  | 284 | 120 | M5 | 1.2         |
|               | 3G3RX2-A4015 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4022 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4037 | AX-FIR4030-SE   | No Footprint | 306              | 213 | 52  | 290 | 170 | M6 | 2           |
|               | 3G3RX2-A4055 | AX-FIR4030-SE   | Footprint    |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4075 | AX-FIR4058-SE   | No Footprint | 436              | 248 | 56  | 421 | 200 | M6 | 3           |
|               | 3G3RX2-A4110 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4150 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4185 | AX-FIR4073-SE   | No Footprint | 290              | 80  | 205 | –   | 50  | –  | 4.3         |
|               | 3G3RX2-A4220 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4300 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-A4370 | AX-FIR4090-SE   | Book         | 300              | 90  | 210 | –   | 60  | –  | 5.1         |
|               | 3G3RX2-A4450 | AX-FIR4146-SE   | Book         | 310              | 100 | 225 | –   | 70  | –  | 6.6         |
|               | 3G3RX2-A4550 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-B4750 | AX-FIR4310-SE   | Block        | 386              | 260 | 115 | 240 | 235 | –  | 9.5         |
|               | 3G3RX2-B4900 |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-B411K |                 |              |                  |     |     |     |     |    |             |
|               | 3G3RX2-B413K |                 |              |                  |     |     |     |     |    |             |

## Input AC reactor



| Voltage class | Reference         | Dimensions in mm |     |     |     |     |     |     |     |             |
|---------------|-------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
|               |                   | A                | B1  | B2  | C1  | C2  | D   | E   | F   | Weight (kg) |
| 3-phase 200 V | AX-RAI02800080-DE | 120              | —   | 70  | —   | 120 | 80  | 52  | 5.5 | 1.78        |
|               | AX-RAI00880200-DE |                  |     | 80  |     |     |     | 62  |     | 2.35        |
|               | AX-RAI00350335-DE | 180              |     | 85  |     | 190 | 140 | 55  | 6   | 5.5         |
|               | AX-RAI00180670-DE |                  |     |     |     | 205 |     |     |     | 6.5         |
|               | AX-RAI00091000-DE |                  |     | 105 |     |     |     | 85  |     | 11.7        |
|               | AX-RAI00071550-DE |                  | 120 | —   | 150 | —   |     |     |     |             |
|               | AX-RAI00042300-DE |                  |     |     |     |     |     |     |     |             |
| 3-phase 400 V | AX-RAI07700050-DE | 120              | —   | 70  | —   | 120 | 80  | 52  | 5.5 | 1.78        |
|               | AX-RAI03500100-DE |                  |     | 80  |     |     |     | 62  |     | 2.35        |
|               | AX-RAI01300170-DE | 180              |     | 75  |     | 195 | 140 | 55  | 6   | 5.5         |
|               | AX-RAI00740335-DE |                  |     | 85  |     | 190 |     |     |     | 6.5         |
|               | AX-RAI00360500-DE |                  |     |     |     | 205 |     |     |     | 11.2        |
|               | AX-RAI00290780-DE |                  |     | 105 |     |     |     | 75  |     |             |
|               | AX-RAI00191150-DE | 240              |     | 110 |     | 275 | 200 |     |     | 16.0        |
|               | AX-RAI00111850-DE |                  |     |     |     |     |     |     |     |             |
|               | AX-RAI00072700-DE |                  | 180 | —   | 210 | —   |     | 110 |     | 25.4        |

## DC reactor

Figure 1

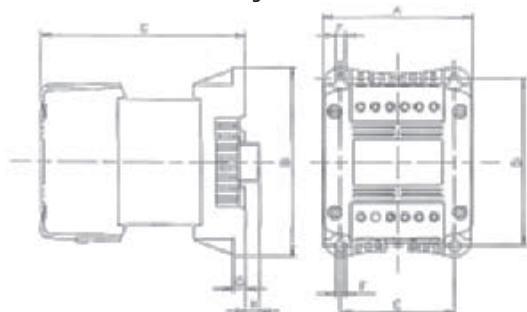
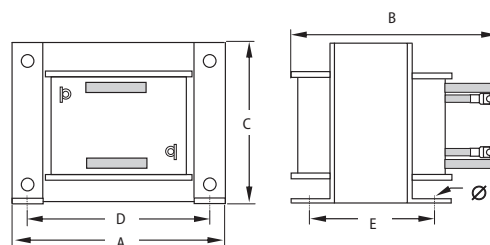


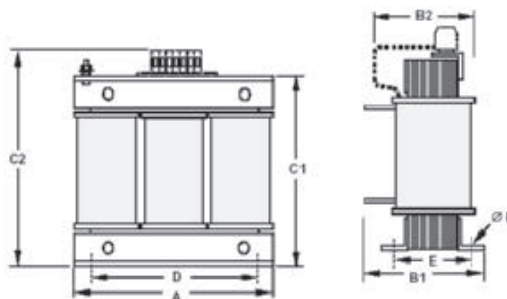
Figure 2



| Voltage class | Reference        | Fig | Dimensions in mm |      |      |     |      |    |      |   |             |
|---------------|------------------|-----|------------------|------|------|-----|------|----|------|---|-------------|
|               |                  |     | A                | B    | C    | D   | E    | F  | G    | H | Weight (kg) |
| 3-phase 200 V | AX-RC10700032-DE | 1   | 84               | 113  | 96   | 101 | 66   | 5  | 7.5  | 2 | 1.22        |
|               | 105              |     |                  |      | 1.60 |     |      |    |      |   |             |
|               | 116              |     |                  |      | 1.95 |     |      |    |      |   |             |
|               | 108              |     |                  |      | 135  |     |      |    |      |   | 124         |
|               | AX-RC01600223-DE | 2   | 120              | 152  | 136  | 135 | 94   | 7  | 2    | - | 5.20        |
|               | 146              |     |                  |      | 6.00 |     |      |    |      |   |             |
|               | AX-RC01110309-DE | 150 | 177              | 160  | 160  | 115 | 2    | -  | 11.4 |   |             |
|               | 183              |     |                  | 14.3 |      |     |      |    |      |   |             |
|               | AX-RC00840437-DE | 2   | 195              | 161  | 163  | 185 | 88   | 10 | -    | - | 17.0        |
|               | 196              |     |                  | 123  |      |     |      |    |      |   | 25.0        |
|               | AX-RC00590614-DE |     | 240              | 188  | 200  | 228 | 109  | 12 | -    | - | 34.0        |
|               | 208              |     |                  | 129  |      |     | 42.0 |    |      |   |             |
|               | 228              |     |                  | 149  |      |     | 48.0 |    |      |   |             |
|               | AX-RC00440859-DE |     |                  |      |      |     |      |    |      |   |             |

| Voltage class | Reference        | Fig | Dimensions in mm |     |     |     |     |      |      |      |             |
|---------------|------------------|-----|------------------|-----|-----|-----|-----|------|------|------|-------------|
|               |                  |     | A                | B   | C   | D   | E   | F    | G    | H    | Weight (kg) |
| 3-phase 400 V | AX-RC27000030-DE | 1   | 84               | 113 | 105 | 101 | 66  | 5    | 7.5  | 2    | 1.60        |
|               | AX-RC14000047-DE |     |                  |     | 116 |     |     |      |      |      | 1.95        |
|               | 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    |      | –    | 5.20        |
|               | AX-RC03350219-DE |     |                  | 146 |     |     |     |      | 6.00 |      |             |
|               | AX-RC02330307-DE |     | 150              | 177 | 160 | 160 | 115 | 7    | 2    | 11.4 |             |
|               | AX-RC01750430-DE |     |                  |     | 183 |     |     |      |      | 14.3 |             |
|               | AX-RC01200644-DE | 2   | 195              | 161 | 163 | 185 | 88  | 10   | –    | –    | 17.0        |
|               | AX-RC00920797-DE |     |                  | 196 |     |     | 123 |      |      |      | 25.5        |
|               | AX-RC00741042-DE |     | 240              | 188 | 200 | 228 | 109 | 12   |      | 34.0 |             |
|               | AX-RC00611236-DE |     |                  |     |     |     | 198 |      | 119  | 38.0 |             |
|               | AX-RC00501529-DE |     |                  |     |     |     | 228 |      | 149  |      | 48.0        |
|               | AX-RC00372094-DE |     |                  |     |     |     |     |      |      |      |             |
|               | AX-RC00312446-DE |     | 300              | 230 | 256 | 250 | 160 |      | 49.0 |      |             |
|               | AX-RC00252981-DE |     |                  | 245 |     |     |     | 52.5 |      |      |             |
|               | AX-RC00213613-DE |     |                  | 250 |     |     |     | 180  | 79.0 |      |             |

## Output AC reactor



| Voltage class | Reference         | Dimensions in mm |     |     |     |     |     |     |     |      | Weight (kg) |
|---------------|-------------------|------------------|-----|-----|-----|-----|-----|-----|-----|------|-------------|
|               |                   | A                | B1  | B2  | C1  | C2  | D   | E   | F   |      |             |
| 3-phase 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-RAO01830160-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  |             |
|               | AX-RAO00490640-DE | 180              | –   | 105 | –   | 210 | 140 | 75  | 6   | 11.7 |             |
|               | 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 | –   | 300 | 200 | 75  | 6   | 16.0 |             |
|               | AX-RAO00191450-DE | 240              | 130 | –   | 215 | –   | 200 | 85  | 6   | 18.6 |             |
|               | AX-RAO00161820-DE | 240              | 160 | –   | 215 | –   | 200 | 110 | 6   | 27.0 |             |
|               | AX-RAO00132200-DE | 300              | 165 | –   | 300 | –   | 200 | 125 | 6   | 33.5 |             |

| Voltage class | Reference         | Dimensions in mm |     |     |     |     |     |     |     |             |
|---------------|-------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
|               |                   | A                | B1  | B2  | C1  | C2  | D   | E   | F   | Weight (kg) |
| 3-phase 400 V | 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  | –   | 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        |
|               | 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 | –   | 281 | 200 | 75  | 6   | 16.0        |
|               | AX-RAO00800750-DE | 240              | –   | 120 | –   | 281 | 200 | 85  | 6   | 18.6        |
|               | AX-RAO00680900-DE | 240              | –   | 150 | –   | 281 | 200 | 110 | 6   | 27.0        |
|               | AX-RAO00531100-DE | 300              | –   | 125 | –   | 350 | 200 | 105 | 6   | 27.9        |
|               | AX-RAO00401490-DE | 300              | 170 | –   | 270 | –   | 200 | 125 | 6   | 44.0        |
|               | AX-RAO00331760-DE | 300              | 170 | –   | 270 | –   | 200 | 125 | 6   | 44.0        |
|               | AX-RAO00262170-DE | 360              | 230 | –   | 315 | –   | 300 | 150 | 8   | 55.0        |
|               | AX-RAO00212600-DE | 420              | 240 | –   | 370 | –   | 300 | 150 | 8   | 75.0        |

## Chokes

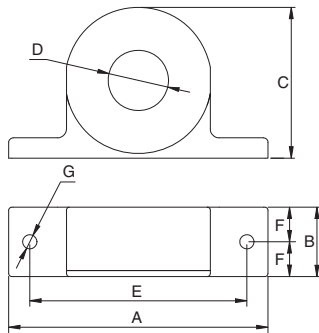


Figure 1

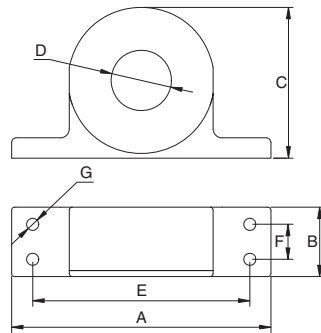


Figure 2

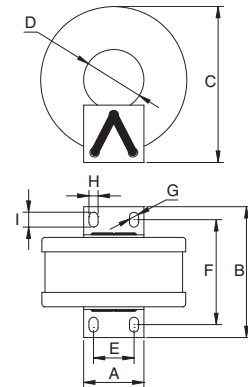


Figure 3

| Reference     | Fig | D (diameter) | Motor (kW) | Dimensions (mm) |      |     |    |     |      |              |   |   | Weight (kg) |
|---------------|-----|--------------|------------|-----------------|------|-----|----|-----|------|--------------|---|---|-------------|
|               |     |              |            | A               | B    | C   | D  | E   | F    | G (diameter) | H | I |             |
| 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 | 5            |   |   | 0.22        |
| AX-FER5045-PE | 2   | 50           | < 45       | 150             | 51   | 112 | 50 | 125 | 30   | 5            | 5 | 7 | 0.53        |
| AX-FER5255-PE | 3   | 52           | ≥ 55       | 47              | 75.5 | 110 | 52 | 30  | 58.5 | 5            |   |   | 1.20        |

DC Supply with Regenerative Active Front End  
Regenerative DC bus supply

Figure 1

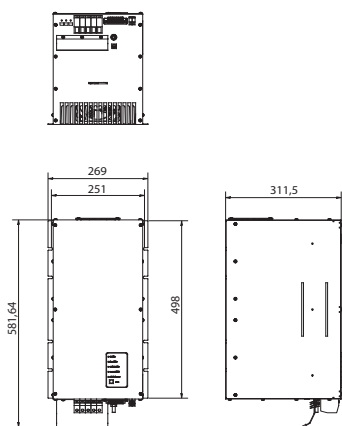


Figure 2

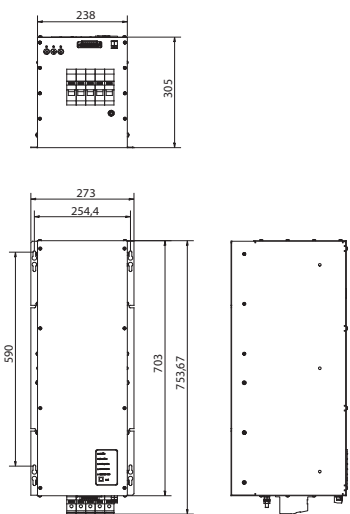
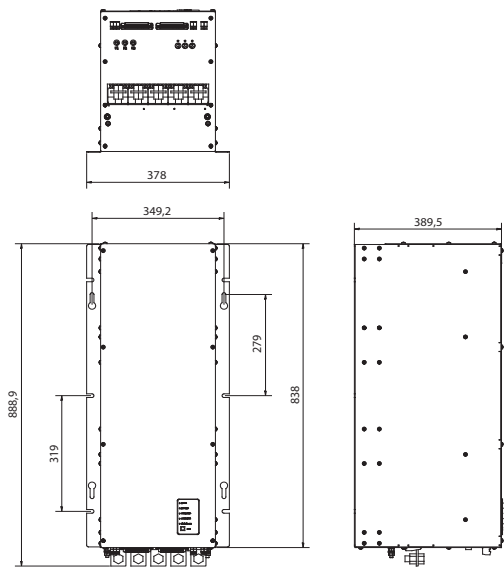
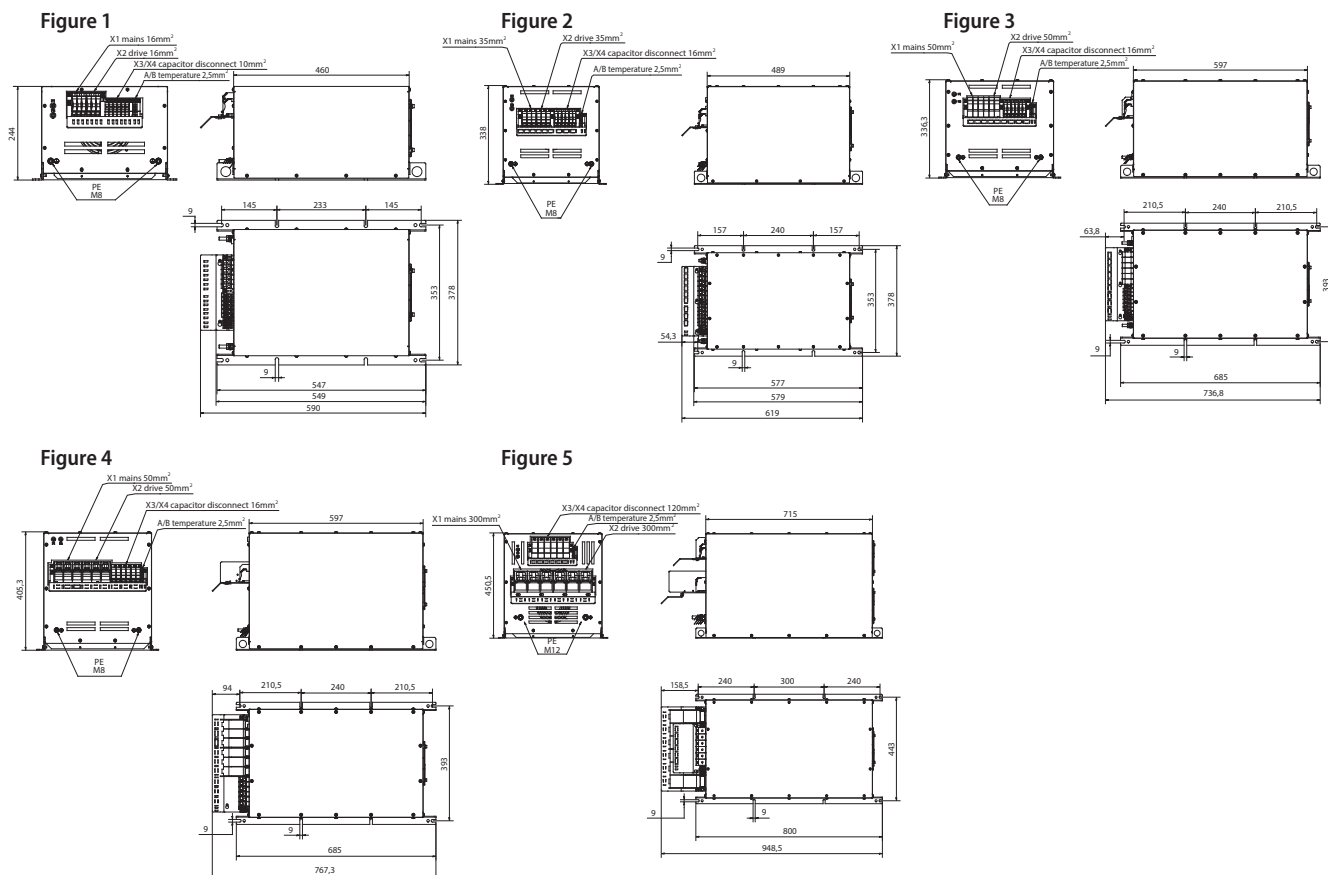


Figure 3



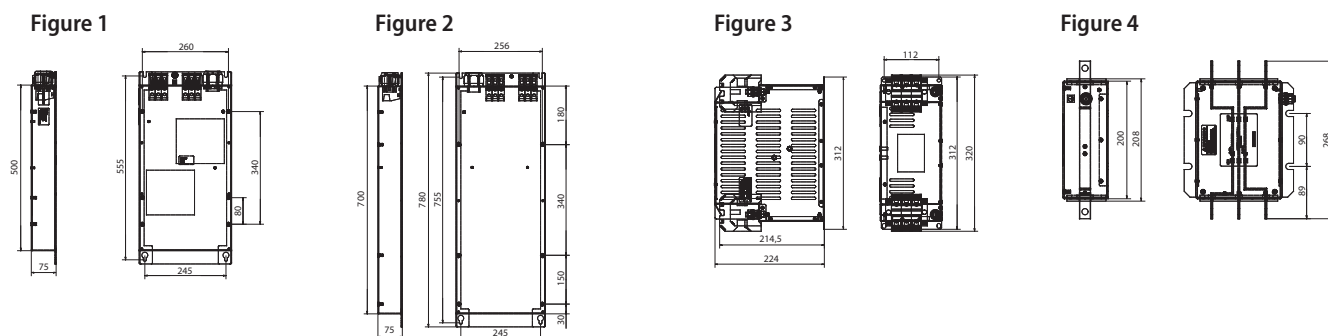
| Reference                   | Fig | Weight (kg) |
|-----------------------------|-----|-------------|
| RFE-B3 30-400-50-230-A-RVE  | 1   | 37          |
| RFE-B3 45-400-50-230-A-RVE  |     | 38          |
| RFE-B3 60-400-50-230-A-RVE  | 2   | 45          |
| RFE-B3 80-400-50-230-A-RVE  |     | 52          |
| RFE-B3 100-400-50-230-A-RVE |     | 65          |
| RFE-B3 125-400-50-230-A-RVE | 3   | 87          |
| RFE-B3 150-400-50-230-A-RVE |     | 89          |
| RFE-B3 200-400-50-230-A-RVE |     | 100         |

## Low harmonic filter



| Reference                  | Fig | Weight (kg) |
|----------------------------|-----|-------------|
| RHF-RA 43-400-50-20-A-RVE  | 1   | 39          |
| RHF-RA 72-400-50-20-A-RV   | 2   | 56          |
| RHF-RA 86-400-50-20-A-RVE  | 3   | 62          |
| RHF-RA 144-400-50-20-A-RVE | 4   | 85          |
| RHF-RA 180-400-50-20-A-RVE | 5   | 102         |
| RHF-RA 217-400-50-20-A-RVE |     | 119         |
| RHF-RA 304-400-50-20-A-RVE |     | 142         |

## EMC filter



| Reference     | Fig | Filter type | Weight (kg) |
|---------------|-----|-------------|-------------|
| RFI-RA 12-RVE | 1   | Footprint   | 11,1        |
| RFI-RA 23-RVE | 2   |             | 15,1        |
| RFI-RA X5-RVE | 3   | Book        | 4,9         |
| RFI-RA X6-RVE | 4   | Block       | 3,9         |

## Regenerative Braking unit

Figure 1

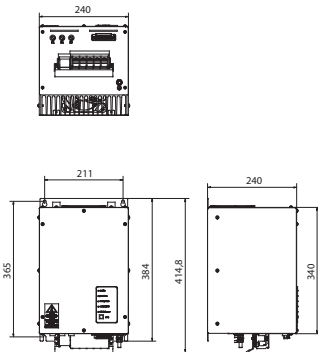


Figure 2

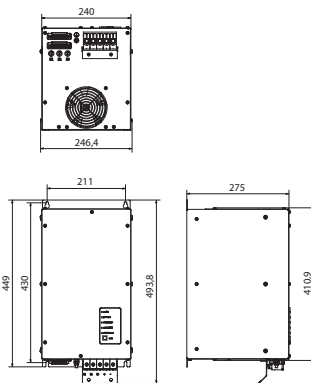


Figure 3

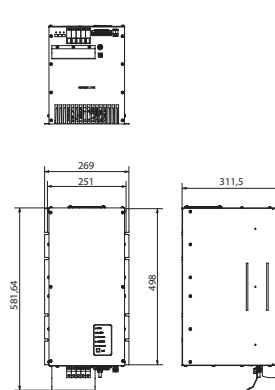


Figure 4

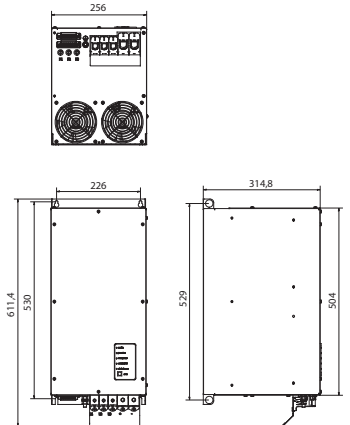


Figure 5

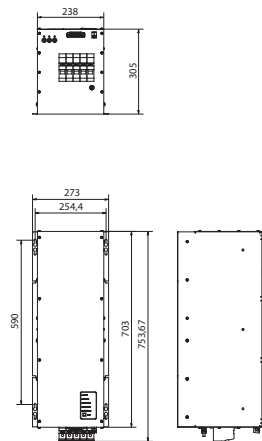


Figure 6

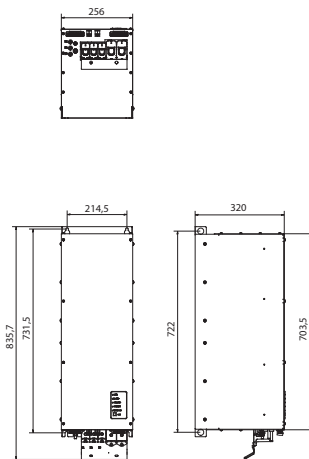
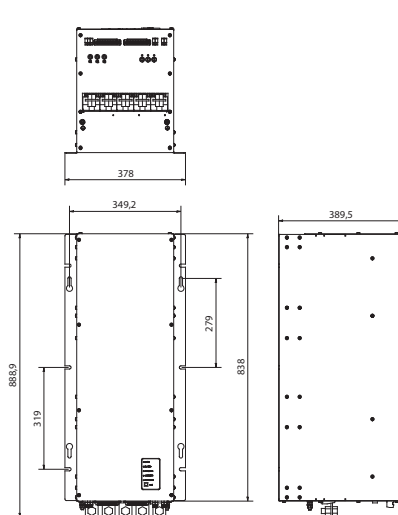


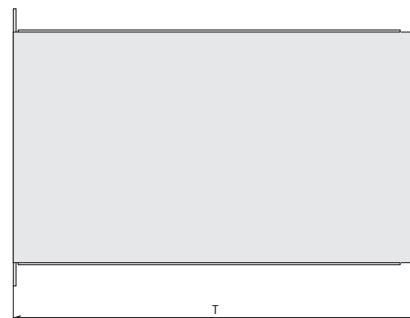
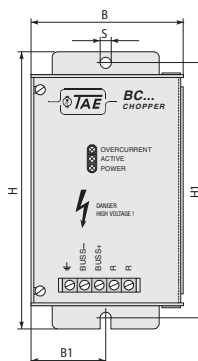
Figure 7



| Models for Low Duty applications (50%) | Fig | Weight (kg) | Models for High Duty applications | Fig | Weight (kg) |
|----------------------------------------|-----|-------------|-----------------------------------|-----|-------------|
| RLD-E0 8-400-50-0-A-RVE                | 1   | 16          | RHD-B0 7-400-50-0-A-RVE           | 1   | 17          |
| RLD-E0 12-400-50-0-A-RVE               |     | 17          | RHD-B0 13-400-50-0-A-RVE          |     | 18          |
| RLD-E0 16-400-50-0-A-RVE               |     | 18          | RHD-B0 18-400-50-0-A-RVE          |     | 20          |
| RLD-E0 20-400-50-0-A-RVE               |     |             | RHD-B0 24-400-50-0-A-RVE          | 3   | 32,5        |
| RLD-E0 24-400-50-0-A-RVE               | 2   |             | RHD-B0 30-400-50-230-A-RVE        |     |             |
| RLD-E0 32-400-50-0-A-RVE               |     | 22          | RHD-B0 50-400-50-230-A-RVE        | 5   | 40          |
| RLD-E0 40-400-50-0-A-RVE               |     | 23          | RHD-B0 70-400-50-230-A-RVE        |     | 51          |
| RLD-E0 48-400-50-0-A-RVE               |     | 27          | RHD-B0 100-400-50-230-A-RVE       | 7   | 85          |
| RLD-E0 58-400-50-0-A-RVE               | 4   | 28          | RHD-B0 125-400-50-230-A-RVE       |     | 91          |
| RLD-E0 80-400-50-0-A-RVE               |     | 30          | RHD-B0 150-400-50-230-A-RVE       |     | 100         |
| RLD-E0 95-400-50-0-A-RVE               |     | 35          |                                   |     |             |
| RLD-E0 116-400-50-0-A-RVE              |     | 38          |                                   |     |             |
| RLD-E0 140-400-50-0-A-RVE              | 6   | 52          |                                   |     |             |
| RLD-E0 170-400-50-230-A-RVE            |     | 60          |                                   |     |             |
| RLD-E0 200-400-50-230-A-RVE            |     | 68          |                                   |     |             |

## Braking unit

| Reference        | Dimensions in mm |      |     |     |     |   |
|------------------|------------------|------|-----|-----|-----|---|
|                  | 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

AX-REM00K15xxx

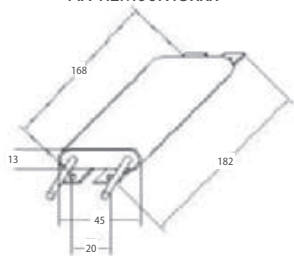


Fig 3

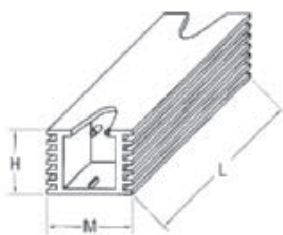


Fig 4

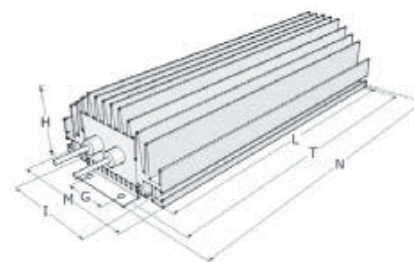
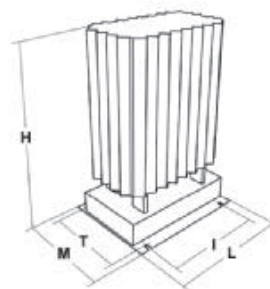
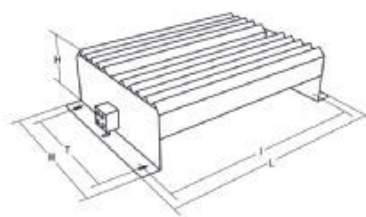
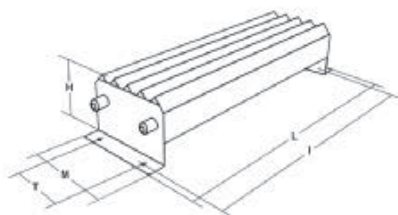


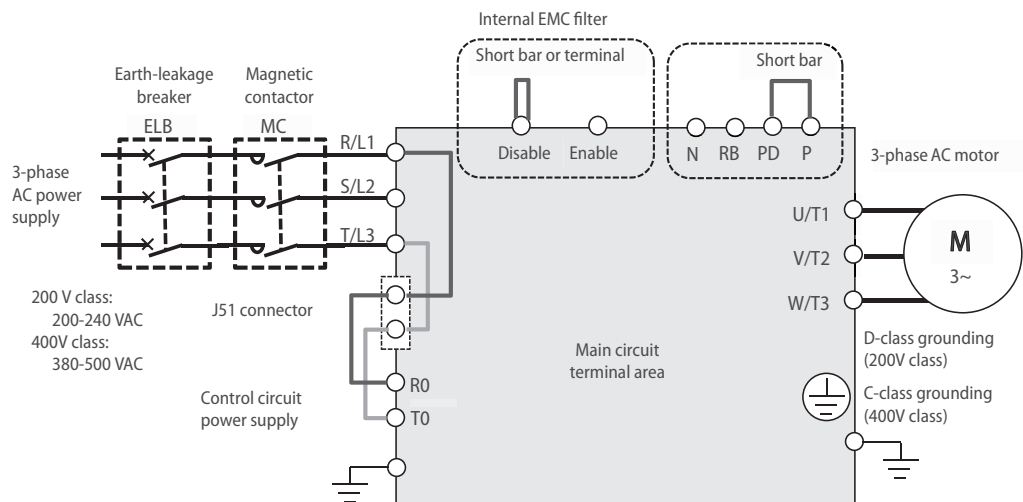
Fig 5



| Reference        | Fig | Dimensions in mm |     |     |      |     |    |     |             |
|------------------|-----|------------------|-----|-----|------|-----|----|-----|-------------|
|                  |     | L                | H   | M   | I    | T   | G  | N   | Weight (kg) |
| AX-REM00K2070-IE | 1   | 105              | 27  | 36  | 94   | —   | —  | —   | 0.2         |
| AX-REM00K2120-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K2200-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K4075-IE |     | 200              | 27  | 36  | 189  | —   | —  | —   | 0.425       |
| AX-REM00K4035-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K4030-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K5120-IE |     | 260              | 27  | 36  | 249  | —   | —  | —   | 0.58        |
| AX-REM00K6100-IE |     | 320              | 27  | 36  | 309  | —   | —  | —   | 0.73        |
| AX-REM00K6035-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K9070-IE | 2   | 200              | 61  | 100 | 74.5 | 216 | 40 | 230 | 1.41        |
| AX-REM00K9020-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM00K9017-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM01K9070-IE | 3   | 365              | 73  | 105 | 350  | 70  | —  | —   | 4           |
| AX-REM01K9017-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM02K1070-IE | 4   | 310              | 100 | 240 | 295  | 210 | —  | —   | 7           |
| AX-REM02K1017-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM03K5035-IE |     | 365              | 100 | 240 | 350  | 210 | —  | —   | 8           |
| AX-REM03K5010-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM19K0006-IE | 5   | 206              | 350 | 140 | 190  | 50  | —  | —   | 8.1         |
| AX-REM19K0008-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM19K0020-IE |     |                  |     |     |      |     |    |     |             |
| AX-REM19K0030-IE |     |                  |     |     |      |     |    |     |             |
|                  |     |                  |     |     |      |     |    |     |             |
| AX-REM38K0012-IE |     | 306              | 350 | 140 | 290  | 50  | —  | —   | 14.5        |

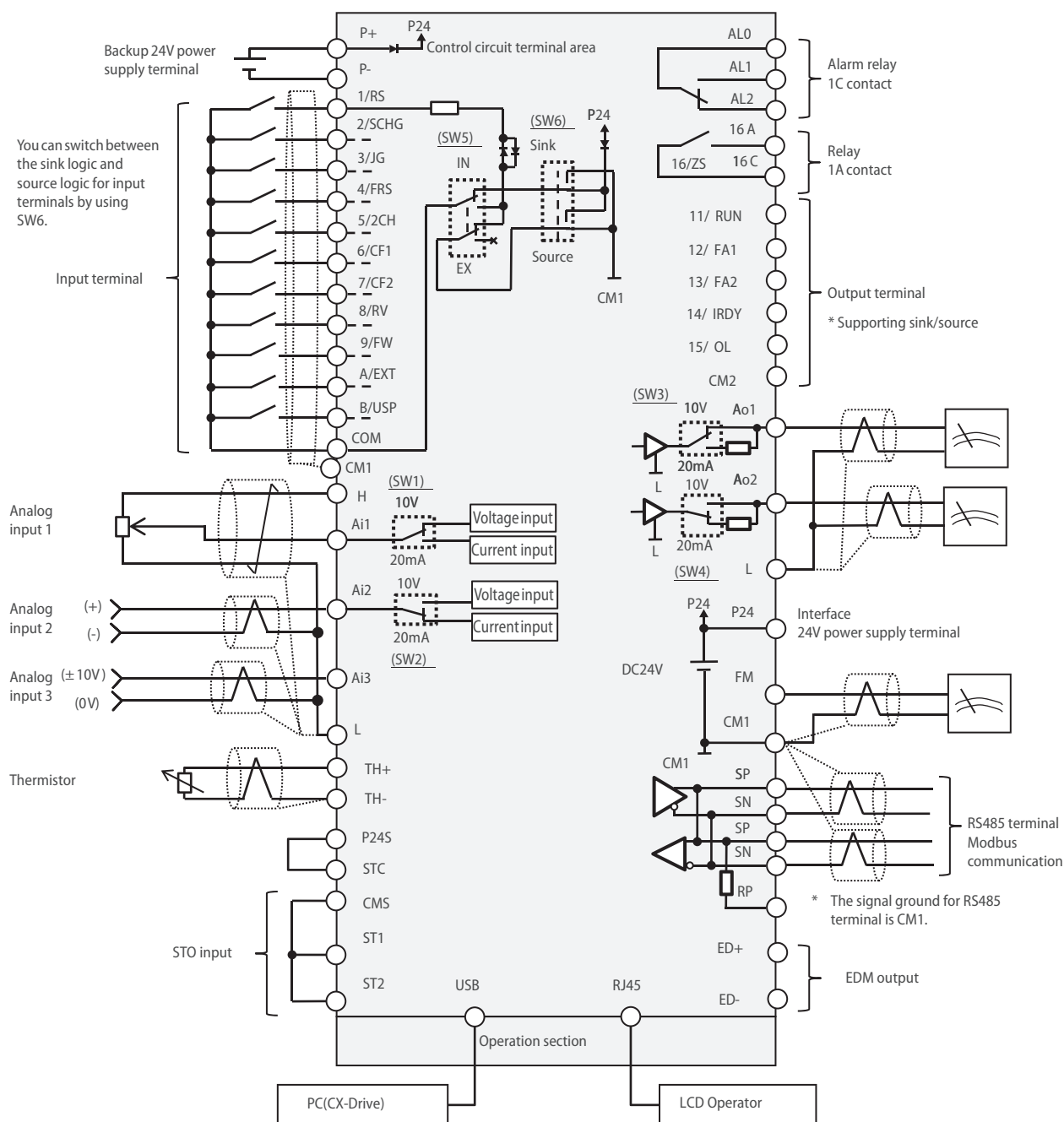
## Installation

## Terminal connections



| Terminal         | Name                                          | Function (signal level)                                                                                                                                                   |
|------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R/L1, S/L2, T/L3 | Main circuit power supply input               | Used to connect the AC power supply                                                                                                                                       |
| U/T1, V/T2, W/T3 | Drive output terminal                         | Used to connect the 3-phase motor                                                                                                                                         |
| PD/+1, P/+       | External DC reactor terminal                  | Remove the short bar between PD and P terminals, and connect the optional reactor DCL for improving power factor                                                          |
| P/+, RB          | Braking resistor connection terminal          | Connect option braking resistor (if a braking torque is required)                                                                                                         |
| P/+, N/-         | Regenerative braking unit connection terminal | Connect optional regenerative braking units                                                                                                                               |
| PE               | Grounding                                     | The earth terminal for the Drive case. Please connect this terminal to the ground<br>Conduct class-D ground work for 200 V class, and class-C ground work for 400 V class |

## Control circuit



|                |               |               | Terminal symbol           | Terminal name             | Description                                                                                                                                                                                                         | Electrical characteristics                                                                                                                                                                                                                                |
|----------------|---------------|---------------|---------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input terminal | Digital input | Contact       | 9, 8, 7, 6, 5, 4, 3, 2, 1 | Input terminal            | You can select terminal functions using the parameter settings corresponding to each terminal. You can switch between the sink logic and source logic by switching SINK/SRC of SW6.                                 | Voltage between each input/COM <ul style="list-style-type: none"> <li>ON voltage Min. DC18V</li> <li>OFF voltage Max. DC3V</li> <li>Maximum allowable voltage DC27V</li> <li>Load current 5.6mA (at DC27V)</li> </ul>                                     |
|                |               | Contact/pulse | A                         | Pulse input-A             | When (CA-90) is set to 00, A, and B terminals can be used as input terminals.                                                                                                                                       | Voltage between each input/COM <ul style="list-style-type: none"> <li>ON voltage Min. DC18V</li> <li>OFF voltage Max. DC3V</li> <li>Maximum allowable voltage DC27V</li> <li>Load current 5.6mA (at DC27V)</li> <li>Maximum 32kpps pulse input</li> </ul> |
|                |               |               | B                         | Pulse input-B             | You can select terminal functions using the parameter settings corresponding to each terminal. When (CA-90) is not set to 00, they are used as terminals for pulse string input. The maximum input pulse is 32kpps. |                                                                                                                                                                                                                                                           |
|                |               | Common        | COM                       | Common for input terminal | Common terminals for digital input terminals (1, 2, 3, 4, 5, 6, 7, 8, 9, A, B). There are three COM terminals                                                                                                       |                                                                                                                                                                                                                                                           |

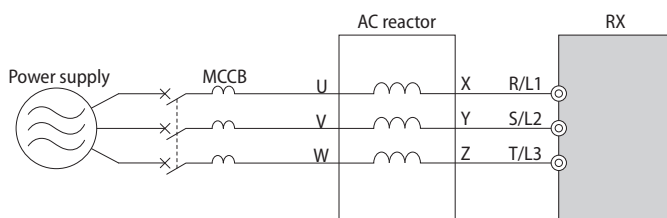
|                                                         |                      |                | Terminal symbol         | Terminal name                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                        | Electrical characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------|----------------------|----------------|-------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output terminal                                         | Digital output       | Open collector | 15, 14, 13, 12, 11      | Output terminal                                           | You can select terminal functions using the parameter settings corresponding to each terminal. These terminals can be used both in sink logic or source logic                                                                                                                                                                                                                                                                                      | Open collector output <ul style="list-style-type: none"> <li>Between each terminal and CM2</li> <li>Voltage drop at ON: 4V or below</li> <li>Maximum allowable voltage: 27V</li> <li>Maximum allowable current: 50mA</li> </ul>                                                                                                                                                                                                                                                     |
|                                                         |                      |                | CM2                     | Common for output terminal                                | Common terminals for output terminals 11-15                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                         |                      | Relay          | 16A<br>16C              | 1a relay terminal                                         | A relay for contact A output.                                                                                                                                                                                                                                                                                                                                                                                                                      | Maximum capacity of contact <ul style="list-style-type: none"> <li>AC250V, 2A (resistance)/AC250V, 1A (induction)</li> </ul> Minimum capacity of contact <ul style="list-style-type: none"> <li>DC1V, 1mA</li> </ul>                                                                                                                                                                                                                                                                |
|                                                         |                      |                | AL0<br>AL1<br>AL2       | 1c relay terminal                                         | A relay for contact C output.                                                                                                                                                                                                                                                                                                                                                                                                                      | Maximum capacity of contact AL1/AL0: <ul style="list-style-type: none"> <li>AC250V, 2A (resistance)/AC250V, 0.2A (induction)</li> </ul> AL2/ALO: <ul style="list-style-type: none"> <li>AC250V, 1A (resistance)/AC250V, 0.2A (induction)</li> </ul> Minimum capacity of contact (common) <ul style="list-style-type: none"> <li>AC100V, 10mA/DC5V, 100mA</li> </ul>                                                                                                                 |
|                                                         |                      | Monitor output | FM                      | Digital monitor (voltage)                                 | For digital monitor output, you can choose the PWM output method at 6.4 ms interval or pulse output method with about 50% duty in which frequency varies.                                                                                                                                                                                                                                                                                          | Pulse string output DC0-10V <ul style="list-style-type: none"> <li>Maximum allowable current 1.2 mA</li> <li>Maximum frequency 3.60 kHz</li> </ul>                                                                                                                                                                                                                                                                                                                                  |
|                                                         |                      |                | CM1                     | Common for digital monitor                                | The common terminal for digital monitor                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Analog input terminal for switching voltage and current | Power supply         |                | L                       | Analog power common                                       | Common terminals for analog input terminals (Ai1, Ai2, Ai3) and analog output terminals (Ao1, Ao2). There are two L terminals                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                         |                      |                | H                       | Power supply for setting speed                            | This is a 10V VDC power supply. It is used when using analog input terminals (Ai1, Ai2, Ai3) and variable resistor for inputting voltage                                                                                                                                                                                                                                                                                                           | Maximum allowable input current 20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                         | Analog input         |                | Ai1                     | Analog input terminal 1 (voltage /current switching SW1)  | For Ai1 and Ai2, 0-10 VDC voltage input and 0-20 mA current input can be switched using a switch for use. It can be used for input frequency command or feedback                                                                                                                                                                                                                                                                                   | In the case of voltage input: <ul style="list-style-type: none"> <li>Input impedance about 10kΩ</li> <li>Allowable input voltage -0.3 to 12V</li> </ul> In the case of current input: <ul style="list-style-type: none"> <li>Input impedance about 100Ω</li> <li>Maximum allowable input current 24 mA</li> </ul>                                                                                                                                                                   |
|                                                         |                      |                | Ai2                     | Analog input terminal 2 (voltage /current switching SW2)  |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                         |                      |                | Ai3                     | Analog input terminal 3                                   | -10 to 10 VDC voltage input is available. It can be used for input frequency command or feedback.                                                                                                                                                                                                                                                                                                                                                  | Only voltage input: <ul style="list-style-type: none"> <li>Input impedance about 10 kΩ</li> <li>Allowable voltage input -12 to 12VDC</li> </ul>                                                                                                                                                                                                                                                                                                                                     |
|                                                         | Analog output        |                | Ao1                     | Analog output terminal 1 (voltage /current switching SW3) | For Ao1 and Ao2, 0-10 VDC voltage output and 0-20 mA current output can be switched using a switch as output of information monitor data of the drive.                                                                                                                                                                                                                                                                                             | In the case of voltage output: <ul style="list-style-type: none"> <li>Maximum allowable output current 2mA</li> <li>Output voltage accuracy <math>\pm 10\%</math> (Ambient temperature: <math>25 \pm 10^\circ\text{C}</math>)</li> </ul> In the case of current input: <ul style="list-style-type: none"> <li>Allowable load impedance 250Ω or below</li> <li>Output current accuracy: <math>\pm 20\%</math> (Ambient temperature: <math>25 \pm 10^\circ\text{C}</math>)</li> </ul> |
|                                                         |                      |                | Ao2                     | Analog output terminal 2 (voltage /current switching SW4) |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Thermistor terminal                                     | Analog input         |                | TH+                     | External thermistor input                                 | When an external thermistor is connected, and resistance abnormality occurs due to abnormal temperature, etc., trip the drive. Connect the thermistor with TH+ and TH-. The level of detecting resistance abnormality can be adjusted from 0 to 10000Ω.<br>[Recommended thermistor characteristics]<br>Recommended product SHIBAURA ELECTRONICS Co., Ltd. PB41 E<br>Allowable rated power: 100mW or more<br>Impedance at abnormal temperature: 3kΩ | 0 to 5VDC<br>[Input circuit]                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                         |                      |                | TH-                     | Common for external thermistor                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| RS485 communication                                     | Serial communication |                | SP<br>SN<br>RP<br>(CM1) | RS-485 terminal for Modbus communication                  | SP terminal: RS-485 differential (+) signal<br>SN terminal: RS-485 differential (-) signal<br>RP terminal: Connect to SP via the terminating resistor<br>CM1 terminal: Connect with the signal ground of an external communication device. (also used by FM terminal)<br>There are two SP terminals and SN terminals each, which are connected internally.<br>Maximum baud rate is 115.2 kps.                                                      | Equipped with terminating resistor (120Ω)<br>Enable: Short RP-SN<br>Disable: Open RP-SN                                                                                                                                                                                                                                                                                                                                                                                             |
| 24V power supply                                        | Power input          |                | P24                     | 24V output power terminal                                 | 24 VDC power supply for contact signal.<br>The common terminal is P-.                                                                                                                                                                                                                                                                                                                                                                              | 100 mA output at maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                         |                      |                | P+                      | External 24V input terminal (24V)                         | Input an external 24 VDC power to the drive. With input of 24 V power, you can change parameter settings or operate optional communication without using a control power supply                                                                                                                                                                                                                                                                    | Allowable input voltage 24 VDC $\pm 10\%$<br>Maximum power consumption 1 A                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                         |                      |                | P-                      | Terminal for P24/P+ (0 (zero) V)                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|     | Terminal symbol | Terminal name                    | Description                                                                                                                                                                                                                   | Electrical characteristics                                                                                                                                                                                                                             |
|-----|-----------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STO | P24S            | 24V output power terminal        | 24-VDC power supply for contact signals dedicated for ST1/ST2 terminal. Common is CMS.                                                                                                                                        | Maximum output current is 100 mA                                                                                                                                                                                                                       |
|     | CMS             | Common terminal for STO terminal | Common terminal of 24-VDC power supply for contact signals dedicated for ST1/ST2 terminal                                                                                                                                     |                                                                                                                                                                                                                                                        |
|     | STC             | Logic switching terminal         | This is a STO Input logic switching terminal. The Input logic can be changed by changing the position of short bar.<br>In case of using external power supply, remove short bars and then it is used as ST1/ST2 input common. | <at sink logic><br>Short bar: connect between P24S and STC.<br><at source logic><br>Short bars: connect between CMS and STC.                                                                                                                           |
|     | ST1/ST2         | STO input terminal               | Input terminal of STO                                                                                                                                                                                                         | Voltage between ST1 -STC/ST2-STC <ul style="list-style-type: none"> <li>ON voltage 15 VDC min.</li> <li>OFF voltage 5 VDC max</li> <li>Maximum allowable voltage 27VDC</li> <li>Load current 5.8 mA (at 27 VDC)</li> </ul> Internal resistance: 4.7 kΩ |
|     | ED+<br>ED-      | Monitoring output                | + side terminal of EDM signal (STO status monitor)<br>- side terminal of EDM signal (STO status monitor)                                                                                                                      | Open collector output <ul style="list-style-type: none"> <li>Between ED+/ED-</li> <li>Voltage depression 4 V or below at ON</li> <li>Maximum allowable voltage 27 V</li> <li>Maximum allowable current 50 mA</li> </ul>                                |

## Drive heat loss

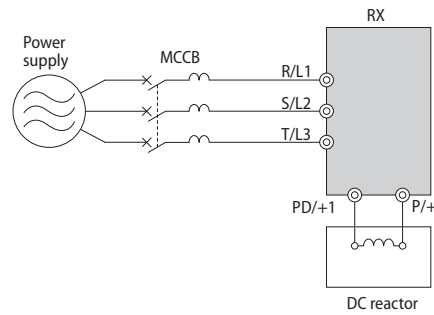
| Voltage | Loss at 100% load (W) |      |      |       |      |      |
|---------|-----------------------|------|------|-------|------|------|
|         | 200 V                 |      |      | 400 V |      |      |
|         | ND                    | LD   | VLD  | ND    | LD   | VLD  |
| 0.4     | 50                    | 53   | 65   |       |      |      |
| 0.75    | 65                    | 80   | 105  | 62    | 67   | 76   |
| 1.5     | 93                    | 118  | 135  | 94    | 98   | 104  |
| 2.2     | 142                   | 162  | 197  | 96    | 107  | 134  |
| 3.7     | 225                   | 253  | 314  | 145   | 163  | 189  |
| 5.5     | 348                   | 365  | 420  | 235   | 260  | 290  |
| 7.5     | 376                   | 400  | 520  | 240   | 280  | 306  |
| 11      | 498                   | 625  | 754  | 260   | 306  | 380  |
| 15      | 742                   | 922  | 1059 | 361   | 444  | 482  |
| 18.5    | 964                   | 1167 | 1332 | 495   | 601  | 633  |
| 22      | 1163                  | 1263 | 1377 | 687   | 805  | 860  |
| 30      | 1317                  | 1536 | 1698 | 783   | 854  | 920  |
| 37      | 1534                  | 1801 | 2092 | 812   | 880  | 971  |
| 45      | 1625                  | 1940 | 2300 | 1047  | 1218 | 1300 |
| 55      | 1878                  | 2669 | 3046 | 1130  | 1488 | 1592 |
| 75      |                       |      |      | 1570  | 1811 | 2020 |
| 90      |                       |      |      | 2034  | 2150 | 2359 |
| 110     |                       |      |      | 2219  | 2397 | 2557 |
| 132     |                       |      |      | 3872  | 4352 | 4598 |

## Input AC reactor



| 3-phase 200 V                   |                   |                 |               | 3-phase 400 V                   |                   |                 |               |
|---------------------------------|-------------------|-----------------|---------------|---------------------------------|-------------------|-----------------|---------------|
| 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           | 0.75 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



| 3-phase 200 V                   |                  |                 |               | 3-phase 400 V                   |                  |                 |               |
|---------------------------------|------------------|-----------------|---------------|---------------------------------|------------------|-----------------|---------------|
| 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         | 0.75                            | AX-RC27000030-DE | 3.0             | 27.00         |
| 0.7                             | AX-RC06750061-DE | 6.1             | 6.75          | 1.5                             | AX-RC14000047-DE | 4.7             | 14.00         |
| 1.5                             | AX-RC03510093-DE | 9.3             | 3.51          | 2.2                             | AX-RC10100069-DE | 6.9             | 10.10         |
| 2.2                             | AX-RC02510138-DE | 13.8            | 2.51          | 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          | 18.5 to 22                      | AX-RC01200644-DE | 64.4            | 1.20          |
| 18.5 to 22                      | AX-RC00301275-DE | 127.5           | 0.30          | 30                              | AX-RC00920797-DE | 79.7            | 0.92          |
| 30                              | AX-RC00231662-DE | 166.2           | 0.23          | 37                              | AX-RC00741042-DE | 104.2           | 0.74          |
| 37                              | AX-RC00192015-DE | 201.5           | 0.19          | 45                              | AX-RC00611236-DE | 123.6           | 0.61          |
| 45                              | AX-RC00162500-DE | 250.0           | 0.16          | 55                              | AX-RC00501529-DE | 152.9           | 0.50          |
| 55                              | AX-RC00133057-DE | 305.7           | 0.13          | 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          |

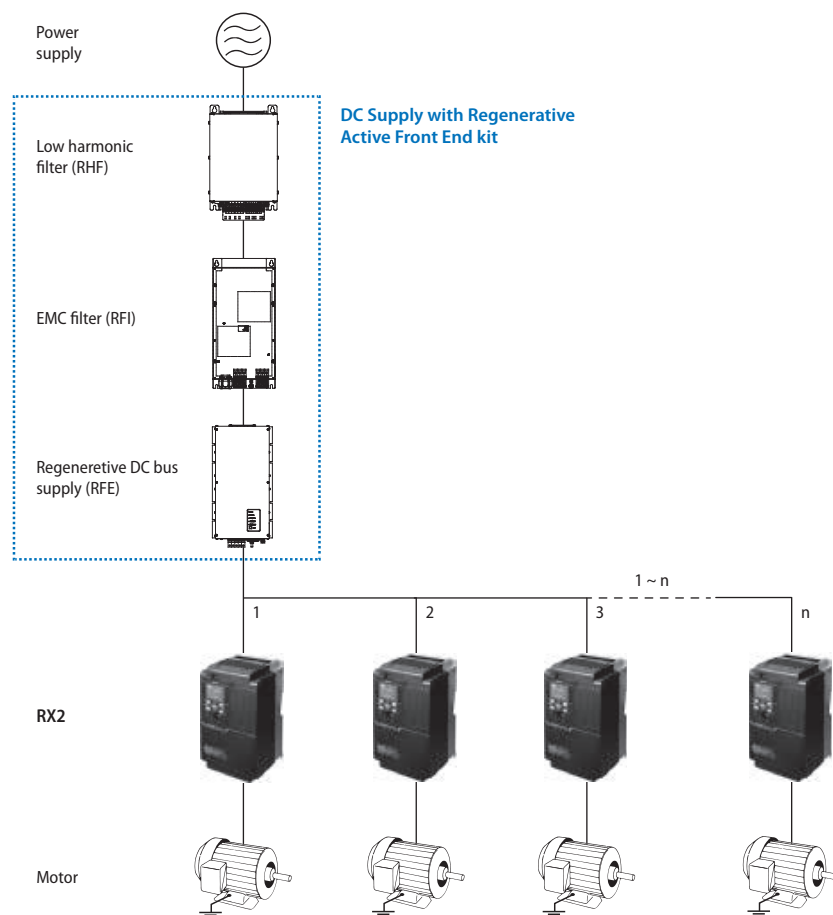
## Output AC reactor

| 3-phase 200 V                   |                   |                 |               | 3-phase 400 V                   |                   |                 |               |
|---------------------------------|-------------------|-----------------|---------------|---------------------------------|-------------------|-----------------|---------------|
| 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         | 0.75 to 1.5                     | AX-RAO16300038-DE | 3.8             | 16.30         |
| 0.75                            | AX-RAO07600042-DE | 4.2             | 7.60          | 2.2                             | AX-RAO11800053-DE | 5.3             | 11.80         |
| 1.5                             | AX-RAO04100075-DE | 7.5             | 4.10          | 4.0                             | AX-RAO07300080-DE | 8.0             | 7.30          |
| 2.2                             | AX-RAO03000105-DE | 10.5            | 3.00          | 5.5                             | AX-RAO04600110-DE | 11.0            | 4.60          |
| 3.7                             | AX-RAO01830160-DE | 16.0            | 1.83          | 7.5                             | AX-RAO03600160-DE | 16.0            | 3.60          |
| 5.5                             | AX-RAO01150220-DE | 22.0            | 1.15          | 11                              | AX-RAO02500220-DE | 22.0            | 2.50          |
| 7.5                             | AX-RAO00950320-DE | 32.0            | 0.95          | 15                              | AX-RAO02000320-DE | 32.0            | 2.00          |
| 11                              | AX-RAO00630430-DE | 43.0            | 0.63          | 18.5                            | AX-RAO01650400-DE | 40.0            | 1.65          |
| 15                              | AX-RAO00490640-DE | 64.0            | 0.49          | 22                              | AX-RAO01300480-DE | 48.0            | 1.30          |
| 18.5                            | AX-RAO00390800-DE | 80.0            | 0.39          | 30                              | AX-RAO01030580-DE | 58.0            | 1.03          |
| 22                              | AX-RAO00330950-DE | 95.0            | 0.33          | 37                              | AX-RAO00800750-DE | 75.0            | 0.80          |
| 30                              | AX-RAO00251210-DE | 121.0           | 0.25          | 45                              | AX-RAO00680900-DE | 90.0            | 0.68          |
| 37                              | AX-RAO00191450-DE | 145.0           | 0.19          | 55                              | AX-RAO00531100-DE | 110.0           | 0.53          |
| 45                              | AX-RAO00161820-DE | 182.0           | 0.16          | 75                              | AX-RAO00401490-DE | 149.0           | 0.40          |
| 55                              | AX-RAO00132200-DE | 220.0           | 0.13          | 90                              | AX-RAO00331760-DE | 176.0           | 0.33          |
|                                 |                   |                 |               | 110                             | AX-RAO00262170-DE | 217.0           | 0.26          |
|                                 |                   |                 |               | 132                             | AX-RAO00212600-DE | 260.0           | 0.21          |

## Braking unit

| Voltage       | Reference        | Specifications  |                 |                 |                 |                                     |
|---------------|------------------|-----------------|-----------------|-----------------|-----------------|-------------------------------------|
|               |                  | Permanent       |                 | Peak (5 s max)  |                 | Minimum connectable resistor (Ohms) |
|               |                  | Current value A | Brake power kVA | Current value A | Brake power kVA |                                     |
| 3-phase 200 V | AX-BCR2035090-TE | 35              | 13              | 90              | 32              | 4                                   |
|               | AX-BCR2070130-TE | 70              | 25              | 130             | 47              | 2.8                                 |
| 3-phase 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                                 |

## DC Supply with Regenerative Active Front End system



## Regenerative DC bus supply

| Reference: RFE-B3             |         |    | 30                                    | 45  | 60  | 80  | 100 | 125 | 150 | 200 |
|-------------------------------|---------|----|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| Max. input power kW           |         |    | 30                                    | 45  | 60  | 80  | 100 | 125 | 150 | 200 |
| DC capacity μF                |         |    | 100                                   |     |     | 220 |     |     | 440 | 660 |
| Max. input current A*1        | Driving | AC | 65                                    | 98  | 130 | 173 | 217 | 271 | 325 | 433 |
|                               |         | DC | 78                                    | 118 | 156 | 208 | 260 | 325 | 390 | 520 |
|                               | Braking | AC | 52                                    | 78  | 104 | 139 | 173 | 217 | 260 | 346 |
|                               |         | DC | 62                                    | 97  | 125 | 167 | 208 | 260 | 312 | 415 |
| Rated input voltage           |         |    | 3-phase 400 V                         |     |     |     |     |     |     |     |
| Allowable voltage fluctuation |         |    | -15% to 10%                           |     |     |     |     |     |     |     |
| Mains frequency               |         |    | 40 to 60 Hz                           |     |     |     |     |     |     |     |
| Efficiency η                  |         |    | 98%                                   |     |     |     |     |     |     |     |
| Degree of protection          |         |    | IP20                                  |     |     |     |     |     |     |     |
| Ambient humidity              |         |    | 85% RH or less (without condensation) |     |     |     |     |     |     |     |
| Storage temperature           |         |    | -25 to 55°C                           |     |     |     |     |     |     |     |
| Ambient temperature           |         |    | 5 to 40°C                             |     |     |     |     |     |     |     |

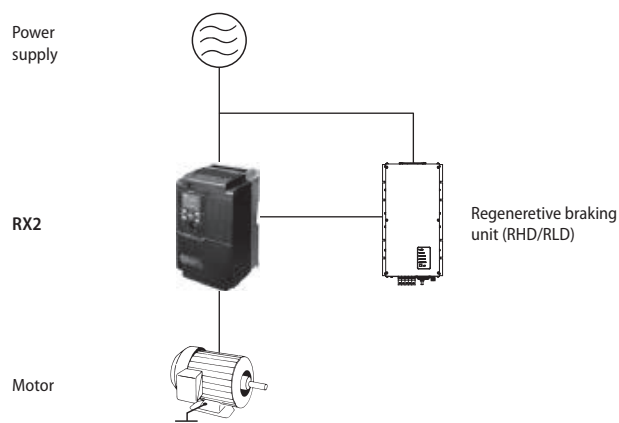
<sup>\*1</sup> At nominal voltage 400 V. 1 min in 10 min.

## Low harmonic filter

| Reference: RHF-RA                        |                            | 43                                    | 72  | 86  | 144 | 180 | 217   | 304 |
|------------------------------------------|----------------------------|---------------------------------------|-----|-----|-----|-----|-------|-----|
| $I_{\text{RMS}}$ current A <sup>*1</sup> | 100% AC                    | 43                                    | 72  | 86  | 144 | 180 | 217   | 304 |
|                                          | 150% AC<br>1 min in 10 min | 64,5                                  | 108 | 129 | 216 | 270 | 325,5 | 456 |
| Heat loss W <sup>*1</sup>                |                            | 242                                   | 352 | 374 | 488 | 692 | 743   | 905 |
| Allowable voltage fluctuation            |                            | -15% to 10%                           |     |     |     |     |       |     |
| Power frequency                          |                            | 50 Hz                                 |     |     |     |     |       |     |
| Efficiency $\eta$                        |                            | 98,5-99,5%                            |     |     |     |     |       |     |
| Degree of protection                     |                            | IP20                                  |     |     |     |     |       |     |
| Ambient humidity                         |                            | 85% RH or less (without condensation) |     |     |     |     |       |     |
| Storage temperature                      |                            | -25 to 55°C                           |     |     |     |     |       |     |
| Ambient temperature                      |                            | -20 to 45°C                           |     |     |     |     |       |     |

<sup>\*1</sup> At nominal voltage 400 V, 50 Hz.

## Regenerative Braking unit system



## Regenerative Braking unit for Low Duty applications (50%)

| Reference: RLD-E0             |    | 8                                     | 12 | 16 | 20 | 24  | 32 | 40 | 48  | 58  | 80  | 95  | 116 | 140 | 170 | 200 |
|-------------------------------|----|---------------------------------------|----|----|----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Max. regenerative power kW    |    | 8                                     | 12 | 16 | 20 | 24  | 32 | 40 | 48  | 58  | 80  | 95  | 116 | 140 | 170 | 200 |
| DC capacity μF                |    | 20                                    |    | 40 |    | 220 |    |    | 440 |     |     |     |     | 660 |     |     |
| Max. current A*1              | DC | 14                                    | 20 | 28 | 35 | 42  | 55 | 70 | 83  | 101 | 139 | 165 | 202 | 242 | 295 | 348 |
|                               | AC | 12                                    | 17 | 23 | 29 | 35  | 46 | 58 | 69  | 84  | 116 | 137 | 168 | 202 | 246 | 290 |
| Allowable voltage fluctuation |    | -15% to 10%                           |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Mains frequency               |    | 50 to 60 Hz                           |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Efficiency η                  |    | 98%                                   |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Degree of protection          |    | IP20                                  |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Ambient humidity              |    | 85% RH or less (without condensation) |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Storage temperature           |    | -25 to 55°C                           |    |    |    |     |    |    |     |     |     |     |     |     |     |     |
| Ambient temperature           |    | 5 to 40°C                             |    |    |    |     |    |    |     |     |     |     |     |     |     |     |

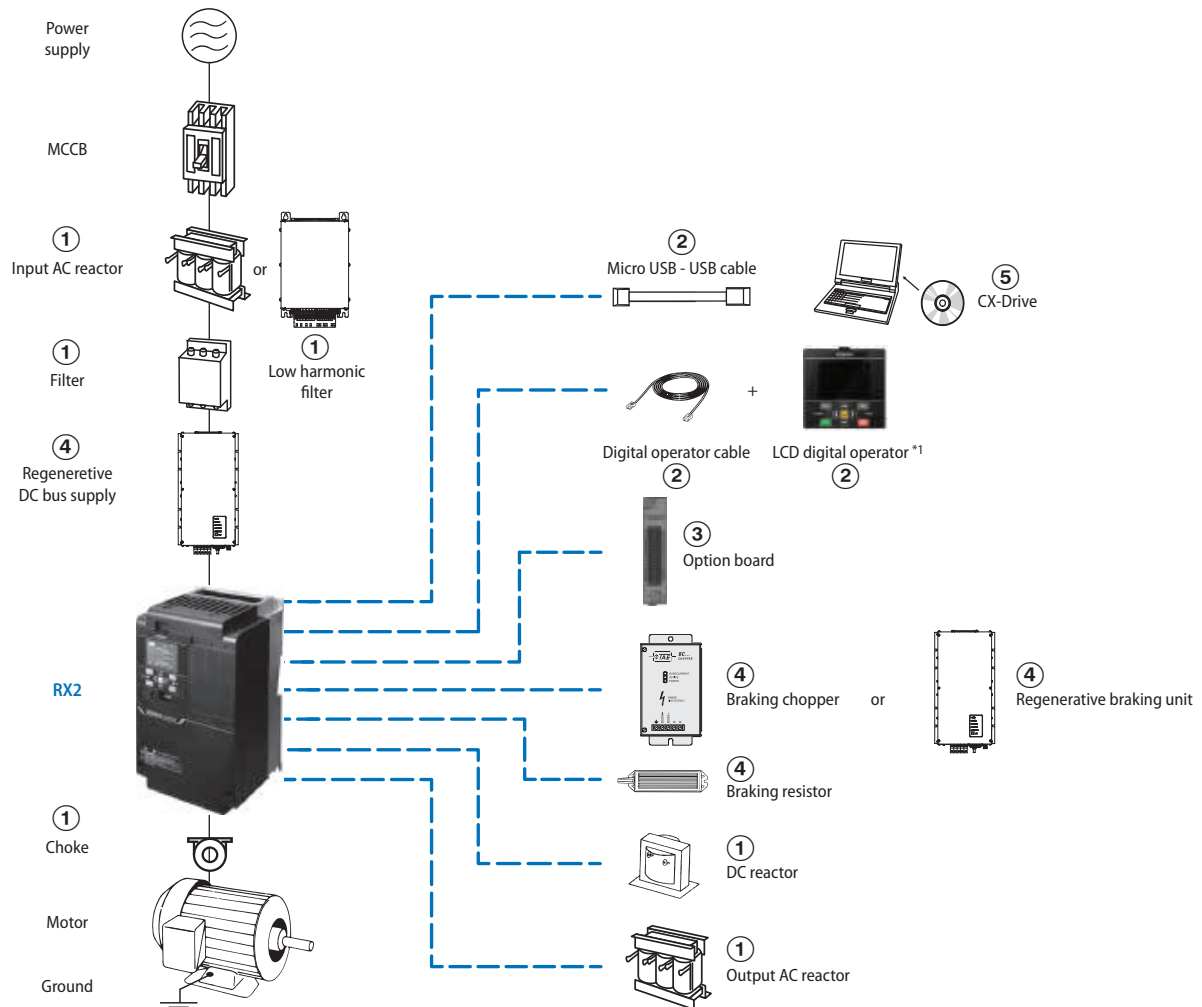
<sup>\*1</sup> At nominal voltage 400 V.

## Regenerative Braking unit for High Duty applications

| Reference: RHD-B0_            |                                    | 7                                     | 13 | 18  | 24 | 30 | 50  | 70  | 100 | 125 | 150 |
|-------------------------------|------------------------------------|---------------------------------------|----|-----|----|----|-----|-----|-----|-----|-----|
| Max. regenerative power kW    |                                    | 7                                     | 13 | 18  | 24 | 30 | 50  | 70  | 100 | 125 | 150 |
| DC capacity $\mu\text{F}$     |                                    | 20                                    |    | 100 | 40 |    | 220 |     | 660 | 440 | 660 |
| Max. current A <sup>*1</sup>  | DC I 100%                          | 12                                    | 23 | 31  | 42 | 52 | 87  | 122 | 174 | 218 | 260 |
|                               | AC I <sub>eff</sub> 100%           | 10                                    | 19 | 26  | 35 | 43 | 72  | 101 | 144 | 180 | 217 |
|                               | AC I <sub>eff</sub> 60 s in 10 min | 12                                    | 23 | 31  | 42 | 52 | 86  | 121 | 173 | 216 | 260 |
| Allowable voltage fluctuation |                                    | -15% to 10%                           |    |     |    |    |     |     |     |     |     |
| Mains frequency               |                                    | 40 to 60 Hz                           |    |     |    |    |     |     |     |     |     |
| Efficiency $\eta$             |                                    | 98%                                   |    |     |    |    |     |     |     |     |     |
| Degree of protection          |                                    | IP20                                  |    |     |    |    |     |     |     |     |     |
| Ambient humidity              |                                    | 85% RH or less (without condensation) |    |     |    |    |     |     |     |     |     |
| Storage temperature           |                                    | -25 to 55°C                           |    |     |    |    |     |     |     |     |     |
| Ambient temperature           |                                    | 5 to 40°C                             |    |     |    |    |     |     |     |     |     |

<sup>\*1</sup> At nominal voltage 400 V.

## Ordering information



\*1 The LCD digital operator is provided with the drive from factory.

## 3G3RX2 drive

| Rated voltage   | Protection class | Max. applicable motor capacity |                                       | Order code   |
|-----------------|------------------|--------------------------------|---------------------------------------|--------------|
|                 |                  | Normal Duty (ND)               | Low Duty (LD)/<br>Very Low Duty (VLD) |              |
| 3-phase 200 VAC | IP20             | 0.4 kW                         | 0.75 kW                               | 3G3RX2-A2004 |
|                 |                  | 0.75 kW                        | 1.5 kW                                | 3G3RX2-A2007 |
|                 |                  | 1.5 kW                         | 2.2 kW                                | 3G3RX2-A2015 |
|                 |                  | 2.2 kW                         | 3.7 kW                                | 3G3RX2-A2022 |
|                 |                  | 3.7 kW                         | 5.5 kW                                | 3G3RX2-A2037 |
|                 |                  | 5.5 kW                         | 7.5 kW                                | 3G3RX2-A2055 |
|                 |                  | 7.5 kW                         | 11 kW                                 | 3G3RX2-A2075 |
|                 |                  | 11 kW                          | 15 kW                                 | 3G3RX2-A2110 |
|                 |                  | 15 kW                          | 18.5 kW                               | 3G3RX2-A2150 |
|                 |                  | 18.5 kW                        | 22 kW                                 | 3G3RX2-A2185 |
|                 |                  | 22 kW                          | 30 kW                                 | 3G3RX2-A2220 |
|                 |                  | 30 kW                          | 37 kW                                 | 3G3RX2-A2300 |
|                 |                  | 37 kW                          | 45 kW                                 | 3G3RX2-A2370 |
|                 |                  | 45 kW                          | 55 kW                                 | 3G3RX2-A2450 |
|                 |                  | 55 kW                          | 75 kW                                 | 3G3RX2-A2550 |

| Rated voltage   | Protection class | Max. applicable motor capacity |                                       | Order code   |
|-----------------|------------------|--------------------------------|---------------------------------------|--------------|
|                 |                  | Normal Duty (ND)               | Low Duty (LD)/<br>Very Low Duty (VLD) |              |
| 3-phase 400 VAC | IP20             | 0.75 kW                        | 1.5 kW                                | 3G3RX2-A4007 |
|                 |                  | 1.5 kW                         | 2.2 kW                                | 3G3RX2-A4015 |
|                 |                  | 2.2 kW                         | 3.7 kW                                | 3G3RX2-A4022 |
|                 |                  | 3.7 kW                         | 5.5 kW                                | 3G3RX2-A4037 |
|                 |                  | 5.5 kW                         | 7.5 kW                                | 3G3RX2-A4055 |
|                 |                  | 7.5 kW                         | 11 kW                                 | 3G3RX2-A4075 |
|                 |                  | 11 kW                          | 15 kW                                 | 3G3RX2-A4110 |
|                 |                  | 15 kW                          | 18.5 kW                               | 3G3RX2-A4150 |
|                 |                  | 18.5 kW                        | 22 kW                                 | 3G3RX2-A4185 |
|                 |                  | 22 kW                          | 30 kW                                 | 3G3RX2-A4220 |
|                 |                  | 30 kW                          | 37 kW                                 | 3G3RX2-A4300 |
|                 |                  | 37 kW                          | 45 kW                                 | 3G3RX2-A4370 |
|                 |                  | 45 kW                          | 55 kW                                 | 3G3RX2-A4450 |
|                 |                  | 55 kW                          | 75 kW                                 | 3G3RX2-A4550 |
|                 | IP00             | 75 kW                          | 90 kW                                 | 3G3RX2-B4750 |
|                 |                  | 90 kW                          | 110 kW                                | 3G3RX2-B4900 |
|                 |                  | 110 kW                         | 132 kW                                | 3G3RX2-B411K |
|                 |                  | 132 kW                         | 160 kW                                | 3G3RX2-B413K |

## Accessories

### ① Line filter

| Schaffner line filter                 |               |                 |                 |             |                             |               |                 |                 |             |
|---------------------------------------|---------------|-----------------|-----------------|-------------|-----------------------------|---------------|-----------------|-----------------|-------------|
| 3-phase 200 V                         |               |                 |                 |             | 3-phase 400 V               |               |                 |                 |             |
| Model 3G3RX2-__                       | Order code    | Rated current A | Leakage current | Weight (kg) | Model 3G3RX2-__             | Order code    | Rated current A | Leakage current | Weight (kg) |
| A2004/A2007/<br>A2015/A2022/<br>A2037 | AX-FIR2021-SE | 21              | 1.44 mA         | 1.5         | A4007/A4015/<br>A4022/A4037 | AX-FIR4011-SE | 11              | 3.1 mA          | 1.2         |
| A2055/A2075/<br>A2110                 | AX-FIR2055-SE | 55              | 1.53 mA         | 2.5         | A4055/A4075/<br>A4110       | AX-FIR4030-SE | 30              | 3.3 mA          | 2           |
| A2150/A2185/<br>A2220                 | AX-FIR2114-SE | 114             | 2.15 mA         | –           | A4150/A4185/<br>A4220       | AX-FIR4058-SE | 58              | 3.3 mA          | 3           |
| A2300                                 | AX-FIR4146-SE | 146             | 3.2 mA          | 6.6         | A4300                       | AX-FIR4073-SE | 73              | 3.75 mA         | 4.3         |
| A2370/A2450/<br>A2550                 | AX-FIR4310-SE | 310             | 3.8 mA          | 9.5         | A4370                       | AX-FIR4090-SE | 90              | 3.75 mA         | 5.1         |
|                                       |               |                 |                 |             | A4450/A4550                 | AX-FIR4146-SE | 146             | 6.95 mA         | 6.6         |
|                                       |               |                 |                 |             | B4750/B4900/<br>B411K/B413K | AX-FIR4310-SE | 310             | 8.2 mA          | 9.5         |

**Note:** IEC61800-3 2nd Environment. Category C1 up to 25 m motor cable length. Category C2 up to 100 m motor cable length. Make sure internal filter is disabled.

### ① Input AC reactor

| 3-phase 200 V     |                   | 3-phase 400 V   |                   |
|-------------------|-------------------|-----------------|-------------------|
| Model 3G3RX2-__   | Order code        | Model 3G3RX2-__ | Order code        |
| A2004/A2007/A2015 | AX-RAI02800100-DE | A4007/A4015     | AX-RAI07700050-DE |
| A2022/A2037       | AX-RAI00880200-DE | A4022/A4037     | 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 |
|                   |                   | B4750/B4900     | AX-RAI00111850-DE |
|                   |                   | B411K/B413K     | AX-RAI00072700-DE |

### ① DC reactor

| 3-phase 200 V   |                  | 3-phase 400 V   |                  |
|-----------------|------------------|-----------------|------------------|
| Model 3G3RX2-__ | Order code       | Model 3G3RX2-__ | Order code       |
| A2004           | AX-RC10700032-DE | A4007           | AX-RC27000030-DE |
| A2007           | AX-RC06750061-DE | A4015           | AX-RC14000047-DE |
| A2015           | AX-RC03510093-DE | A4022           | AX-RC10100069-DE |
| A2022           | AX-RC02510138-DE | A4037           | AX-RC06400116-DE |
| A2037           | AX-RC01600223-DE | A4055           | AX-RC04410167-DE |
| A2055           | AX-RC01110309-DE | A4075           | AX-RC03350219-DE |
| A2075           | AX-RC00840437-DE | A4110           | AX-RC02330307-DE |
| A2110           | AX-RC00590614-DE | A4150           | AX-RC01750430-DE |
| A2150           | AX-RC00440859-DE | A4185/A4220     | AX-RC01200644-DE |
| A2185/A2220     | AX-RC00301275-DE | A4300           | AX-RC00920797-DE |
| A2300           | AX-RC00231662-DE | A4370           | AX-RC00741042-DE |

| 3-phase 200 V   |                  | 3-phase 400 V   |                  |
|-----------------|------------------|-----------------|------------------|
| Model 3G3RX2-__ | Order code       | Model 3G3RX2-__ | Order code       |
| A2370           | AX-RC00192015-DE | A4450           | AX-RC00611236-DE |
| A2450           | AX-RC00162500-DE | A4550           | AX-RC00501529-DE |
| A2500           | AX-RC00133057-DE | B4750           | AX-RC00372094-DE |
|                 |                  | B4900           | AX-RC00312446-DE |
|                 |                  | B411K           | AX-RC00252981-DE |
|                 |                  | B413K           | AX-RC00213613-DE |

## ① Chokes

| Diameter | Description                | Order code    |
|----------|----------------------------|---------------|
| 21       | For 2.2 kW motors or below | AX-FER2102-PE |
| 28       | For 15 kW motors or below  | AX-FER2815-PE |
| 50       | For 45 kW motors or below  | AX-FER5045-PE |
| 52       | For 55 kW motors or above  | AX-FER5255-PE |

## ① Output AC reactor

| 3-phase 200 V   |                   | 3-phase 400 V   |                   |
|-----------------|-------------------|-----------------|-------------------|
| Model 3G3RX2-__ | Order code        | Model 3G3RX2-__ | Order code        |
| A2004           | AX-RAO11500026-DE | A4007/A4015     | AX-RAO16300038-DE |
| A2007           | AX-RAO07600042-DE | A4022           | AX-RAO11800053-DE |
| A2015           | AX-RAO04100075-DE | A4037           | AX-RAO07300080-DE |
| A2022           | AX-RAO03000105-DE | A4055           | AX-RAO04600110-DE |
| A2037           | AX-RAO01830160-DE | A4075           | AX-RAO03600160-DE |
| A2055           | AX-RAO01150220-DE | A4110           | AX-RAO02500220-DE |
| A2075           | AX-RAO00950320-DE | A4150           | AX-RAO02000320-DE |
| A2110           | AX-RAO00630430-DE | A4185           | AX-RAO01650400-DE |
| A2150           | AX-RAO00490640-DE | A4220           | AX-RAO01300480-DE |
| A2185           | AX-RAO00390800-DE | A4300           | AX-RAO01030580-DE |
| A2220           | AX-RAO00330950-DE | A4370           | AX-RAO00800750-DE |
| A2300           | AX-RAO00251210-DE | A4450           | AX-RAO00680900-DE |
| A2370           | AX-RAO00191450-DE | A4550           | AX-RAO00531100-DE |
| A2450           | AX-RAO00161820-DE | B4750           | AX-RAO00401490-DE |
| A2500           | AX-RAO00132200-DE | B4900           | AX-RAO00331760-DE |
|                 |                   | B411K           | AX-RAO00262170-DE |
|                 |                   | B413K           | AX-RAO00212600-DE |

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

## ② Accessories

| Type                                    | Order code |
|-----------------------------------------|------------|
| Digital operator cable (RJ45 connector) | 1 m length |
|                                         | 3 m length |

## ③ Option boards

| Type                       | Description                      | Order code     |
|----------------------------|----------------------------------|----------------|
| Encoder feedback           | PG speed controller option board | 3G3AX-RX2-PG01 |
| Communication option board | PROFIBUS option board            | P1-PB          |
|                            | PROFINET option board            | P1-PN          |
|                            | Modbus TCP option board          | P1-EN          |
|                            | EtherCAT option board            | 3G3AX-RX2-ECT  |

## ④ DC Supply with Regenerative Active Front End

| Max. input power kW | Stand-alone                 |                            |               | Kit                          |
|---------------------|-----------------------------|----------------------------|---------------|------------------------------|
|                     | Regenerative DC bus supply  | Low harmonic filter        | EMC filter    |                              |
| 30                  | RFE-B3 30-400-50-230-A-RVE  | RHF-RA 43-400-50-20-A-RVE  | RFI-RA 12-RVE | RFE-B3 30-400-50-230-IF-RVE  |
| 45                  | RFE-B3 45-400-50-230-A-RVE  | RHF-RA 72-400-50-20-A-RVE  |               | RFE-B3 45-400-50-230-IF-RVE  |
| 60                  | RFE-B3 60-400-50-230-A-RVE  | RHF-RA 86-400-50-20-A-RVE  | RFI-RA 23-RVE | RFE-B3 60-400-50-230-IF-RVE  |
| 80                  | RFE-B3 80-400-50-230-A-RVE  | RHF-RA 144-400-50-20-A-RVE |               | RFE-B3 80-400-50-230-IF-RVE  |
| 100                 | RFE-B3 100-400-50-230-A-RVE |                            | RFI-RA X5-RVE | RFE-B3 100-400-50-230-IF-RVE |
| 125                 | RFE-B3 125-400-50-230-A-RVE | RHF-RA 180-400-50-20-A-RVE | RFI-RA X6-RVE | RFE-B3 125-400-50-230-IF-RVE |
| 150                 | RFE-B3 150-400-50-230-A-RVE | RHF-RA 217-400-50-20-A-RVE |               | RFE-B3 150-400-50-230-IF-RVE |
| 200                 | RFE-B3 200-400-50-230-A-RVE | RHF-RA 304-400-50-20-A-RVE |               | RFE-B3 200-400-50-230-IF-RVE |

**Note:** The DC Supply with Regenerative Active Front End kit includes a Regenerative DC bus supply, low harmonic filter and EMC filter.

## ④ Regenerative Braking unit

| Low Duty applications (50%) |                             | High Duty applications     |                             |
|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| Max. regenerative power kW  | Regenerative braking unit   | Max. regenerative power kW | Regenerative braking unit   |
| 8                           | RLD-E0 8-400-50-0-A-RVE     | 7                          | RHD-B0 7-400-50-0-A-RVE     |
| 12                          | RLD-E0 12-400-50-0-A-RVE    | 13                         | RHD-B0 13-400-50-0-A-RVE    |
| 16                          | RLD-E0 16-400-50-0-A-RVE    | 18                         | RHD-B0 18-400-50-0-A-RVE    |
| 20                          | RLD-E0 20-400-50-0-A-RVE    | 24                         | RHD-B0 24-400-50-0-A-RVE    |
| 24                          | RLD-E0 24-400-50-0-A-RVE    | 30                         | RHD-B0 30-400-50-230-A-RVE  |
| 32                          | RLD-E0 32-400-50-0-A-RVE    | 50                         | RHD-B0 50-400-50-230-A-RVE  |
| 40                          | RLD-E0 40-400-50-0-A-RVE    | 70                         | RHD-B0 70-400-50-230-A-RVE  |
| 48                          | RLD-E0 48-400-50-0-A-RVE    | 100                        | RHD-B0 100-400-50-230-A-RVE |
| 58                          | RLD-E0 58-400-50-0-A-RVE    | 125                        | RHD-B0 125-400-50-230-A-RVE |
| 80                          | RLD-E0 80-400-50-0-A-RVE    | 150                        | RHD-B0 150-400-50-230-A-RVE |
| 95                          | RLD-E0 95-400-50-0-A-RVE    |                            |                             |
| 116                         | RLD-E0 116-400-50-0-A-RVE   |                            |                             |
| 140                         | RLD-E0 140-400-50-0-A-RVE   |                            |                             |
| 170                         | RLD-E0 170-400-50-230-A-RVE |                            |                             |
| 200                         | RLD-E0 200-400-50-230-A-RVE |                            |                             |

## ④ Braking unit, braking resistor unit

| Drive                  |               |                            |                       |                             | Braking resistor unit                 |            |                  |                                                                          |            |                  |
|------------------------|---------------|----------------------------|-----------------------|-----------------------------|---------------------------------------|------------|------------------|--------------------------------------------------------------------------|------------|------------------|
| Voltage                | Max. motor kW | Model 3G3RX2-__<br>3-phase | Braking unit AX-BCR__ | Connectable min. resistance | Drive mounted type (3%ED, 10 sec max) |            | Braking torque % | External resistor 10%ED, 10 sec max for built-in, 5 sec for braking unit |            | Braking torque % |
|                        |               |                            |                       |                             | Type AX-__                            | Resistance |                  | Type AX-__                                                               | Resistance |                  |
| 200 V<br>(three-phase) | 0.55          | A2004                      | Built-in              | 50 Ω                        | REM00K1200-IE                         | 200 Ω      | 180              | REM00K1200-IE                                                            | 200 Ω      | 180              |
|                        | 1.1           | A2007                      |                       |                             |                                       |            | 100              | REM00K2070-IE                                                            | 70 Ω       | 200              |
|                        | 1.5           | A2015                      |                       | 35 Ω                        | REM00K2070-IE                         | 70 Ω       | 140              | REM00K4075-IE                                                            | 75 Ω       | 130              |
|                        | 2.2           | A2022                      |                       |                             |                                       |            | 90               | REM00K4035-IE                                                            | 35 Ω       | 180              |
|                        | 4.0           | A2037                      |                       |                             | REM00K4075-IE                         |            | 50               | REM00K6035-IE                                                            |            | 100              |
|                        | 5.5           | A2055                      |                       | 16 Ω                        | REM00K4035-IE                         | 35 Ω       | 75               | REM00K9020-IE                                                            | 20 Ω       | 150              |
|                        | 7.5           | A2075                      |                       | 10 Ω                        |                                       |            | 55               | REM01K9017-IE                                                            | 17 Ω       | 110              |
|                        | 11.0          | A2110                      |                       |                             | REM00K6035-IE                         |            | 40               | REM02K1017-IE                                                            |            | 75               |
|                        | 15.0          | A2150                      |                       | 7.5 Ω                       | REM00K9017-IE                         | 17 Ω       | 55               | REM03K5010-IE                                                            | 10 Ω       | 95               |
|                        | 18.5          | A2185                      |                       | 5 Ω                         | REM03K5010-IE                         |            | 75               | REM19K0008-IE                                                            | 8 Ω        | 95               |
|                        | 22.0          | A2220                      |                       |                             |                                       |            | 65               |                                                                          |            | 80               |
|                        | 30.0          | A2300                      | 2035090-TE            | 4 Ω                         |                                       |            |                  | REM19K0006-IE                                                            | 6 Ω        | 80               |
|                        | 37.0          | A2370                      |                       |                             |                                       |            |                  |                                                                          |            | 60               |
|                        | 45.0          | A2450                      | 2070130-TE            | 2.8 Ω                       |                                       |            |                  | 2 × REM19K0006-IE                                                        | 3 Ω        | 105              |
|                        | 55.0          | A2550                      |                       |                             |                                       |            |                  |                                                                          |            | 85               |
| 400 V<br>(three-phase) | 1.1           | A4007                      | Built-in              | 100 Ω                       | REM00K1400-IE                         | 400 Ω      | 200              | REM00K1400-IE                                                            | 400 Ω      | 200              |
|                        | 1.5           | A4015                      |                       |                             | REM00K1200-IE                         |            | 190              | REM00K2200-IE                                                            | 200 Ω      | 190              |
|                        | 2.2           | A4022                      |                       |                             | REM00K2200-IE                         |            | 130              | REM00K5120-IE                                                            | 120 Ω      | 200              |
|                        | 3.7           | A4037                      |                       | 70 Ω                        | REM00K2120-IE                         | 120 Ω      | 120              | REM00K6100-IE                                                            | 100 Ω      | 140              |
|                        | 5.5           | A4055                      |                       |                             | REM00K4075-IE                         |            | 140              | REM00K9070-IE                                                            | 70 Ω       | 150              |
|                        | 7.5           | A4075                      |                       | 35 Ω                        |                                       | 75 Ω       | 100              | REM01K9070-IE                                                            |            | 110              |
|                        | 11.0          | A4110                      |                       |                             | REM00K6100-IE                         |            | 50               | REM02K1070-IE                                                            |            | 75               |
|                        | 15.0          | A4150                      |                       | 24 Ω                        | REM00K9070-IE                         | 70 Ω       | 55               | REM03K5035-IE                                                            | 35 Ω       | 110              |
|                        | 18.5          | A4185                      |                       | 20 Ω                        | REM03K5035-IE                         |            | 90               | REM19K0030-IE                                                            | 30 Ω       | 100              |
|                        | 22.0          | A4220                      |                       |                             |                                       | 35 Ω       | 75               |                                                                          |            | 85               |
|                        | 30.0          | A4300                      |                       | 16 Ω                        |                                       |            |                  | REM19K0020-IE                                                            | 20 Ω       | 95               |
|                        | 37.0          | A4370                      |                       | 11 Ω                        |                                       |            |                  | REM38K0012-IE                                                            | 15 Ω       | 125              |
|                        | 45.0          | A4450                      | 4017068-TE            | 8.5 Ω                       |                                       |            |                  |                                                                          |            | 100              |
|                        | 55.0          | A4550                      | 4035090-TE            |                             |                                       |            |                  | 2 × REM19K0020-IE                                                        | 10 Ω       | 100              |
|                        | 75.0          | B4750                      |                       |                             |                                       |            |                  | 3 × REM19K0030-IE                                                        |            | 75               |
|                        | 90.0          | B4900                      | 4070130-TE            | 5.5 Ω                       |                                       |            |                  | 2 × REM38K0012-IE                                                        | 6 Ω        | 105              |
|                        | 110.0         | B411K                      | 4090240-TE            | 3.2 Ω                       |                                       |            |                  | 3 × REM38K0012-IE                                                        | 4 Ω        | 125              |
|                        | 132.0         | B413K                      |                       |                             |                                       |            |                  |                                                                          |            | 105              |

## ⑤ Computer software

| Type              | Description                                 | Order code |
|-------------------|---------------------------------------------|------------|
| Computer software | Configuration and monitoring software tool  | CX-Drive   |
|                   |                                             | CX-One     |
|                   | Software tool for energy saving calculation | €Saver     |

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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