




■ Safety CPU

| Item | | R08SF | R16SF | R32SF | R120SF | |
|--|--|---|--|---|--|------------|
| Operation control method | | Stored program cyclic operation | | | | |
| I/O control mode | | Refresh mode (The direct access input/output is available by specifying the direct access input/output (DX, DY).) | | | | |
| Instruction processing time | LD instruction | 0.98ns | | | | |
| | MOV instruction | 1.96ns | | | | |
| Memory capacity | Program capacity | 80K steps (320K bytes) (For safety programs: 40K steps (160K bytes) ^{*7)} | 160K steps (640K bytes) (For safety programs: 40K steps (160K bytes) ^{*7)} | 320K steps (1280K bytes) (For safety programs: 40K steps (160K bytes) ^{*7)} | 1200K steps (4800K bytes) (For safety programs: 40K steps (160K bytes) ^{*7)} | |
| | Program memory | 320K bytes (For safety programs: 160K bytes) | 640K bytes (For safety programs: 160K bytes) | 1280K bytes (For safety programs: 160K bytes) | 4800K bytes (For safety programs: 160K bytes) | |
| | Device/label memory ^{*1} | 1178K bytes | 1710K bytes | 2306K bytes | 3370K bytes | |
| | Signal flow memory | Area for standard/safety programs | 10K bytes | 20K bytes | 40K bytes | 150K bytes |
| | | Area for standard/safety function blocks | 256K bytes ^{*5} | | | |
| | Data memory | 5M bytes | 10M bytes | 20M bytes | 40M bytes | |
| | CPU buffer memory | 1024K bytes (512K words) (including the built-in function information area capacity 4M bytes (2K words)) | | | | |
| | Refresh memory | 2048K bytes ^{*2} | | | | |
| Number of storable files ^{*6} | Program memory (P: number of program files, FB: number of FB files) | 380 (including safety programs) (P: 252, FB: 128 (One FB file can store 64 function blocks.)) | | | | |
| | Program memory (P: number of safety program files, FB: number of safety FB files) | 48 (P: 32, FB: 16 (One FB file can store 64 function blocks.)) | | | | |
| | Device/label memory (file storage area) | 323 (with or without an extended SRAM cassette) ^{*3} | | | | |
| | Data memory | 512 ^{*4} | | | | |
| | SD memory card | <ul style="list-style-type: none"> • NZ1MEM-2GBSD: 256^{*4} • NZ1MEM-4GBSD, NZ1MEM-8GBSD, NZ1MEM-16GBSD: 32767^{*4} | | | | |
| Number of storable folders ^{*6} | Data memory | 512 ^{*4} | | | | |
| | SD memory card | <ul style="list-style-type: none"> • NZ1MEM-2GBSD: 256^{*4} • NZ1MEM-4GBSD, NZ1MEM-8GBSD, NZ1MEM-16GBSD: 32767^{*4} | | | | |
| USB port | USB2.0 High Speed (miniB)×1 | | | | | |
| Ethernet port | Refer to the following.  MELSEC iQ-R Ethernet/CC-Link IE User's Manual (Startup) | | | | | |
| Clock function | Year, month, date, hour, minute, second, and day of the week (automatic leap year adjustment) -1.00 to +1.00s/d at 0 to 55°C | | | | | |
| Allowable momentary power failure time | The time differs depending on the power supply module used. ( MELSEC iQ-R Module Configuration Manual) | | | | | |
| Internal current consumption (5VDC) | 0.76A | | | | | |
| External dimensions | Height | 106mm (Base unit mounting side: 98mm) | | | | |
| | Width | 27.8mm | | | | |
| | Depth | 110mm | | | | |
| Weight | 0.20kg | | | | | |

- *1 The capacity of device area, label area, latch label area, and file storage area can be changed in parameter. The capacity of the device/label memory can be increased by inserting an extended SRAM cassette. ( MELSEC iQ-R CPU Module User's Manual (Application))
- *2 This is the total capacity of the device area and module label area.
- *3 System files are included.
- *4 The number indicates the number of files and folders (including system files and system folders) can be created in the root directory on the condition that the number of characters in the file or folder name is 13 or less. In a subdirectory, up to 32767 folders can be created. Note that the number of storable files and folders will decrease if many folders with a long name, more than 13 characters (including an extension), are created.
- *5 For the programmable controller CPU with the firmware version "27" or earlier, the memory capacity is 20K bytes.
- *6 The following characters cannot be used for file or folder names: A space, "%*+./:;<=>?[\\]!{}&~@^".
- *7 Up to 40K steps of the program capacity for the standard programs can be used for the safety programs.

Point 

Wait for five seconds or longer after power-off and power on the system again. If the interval between the power-off and the power-on is short, the module may not start up.
