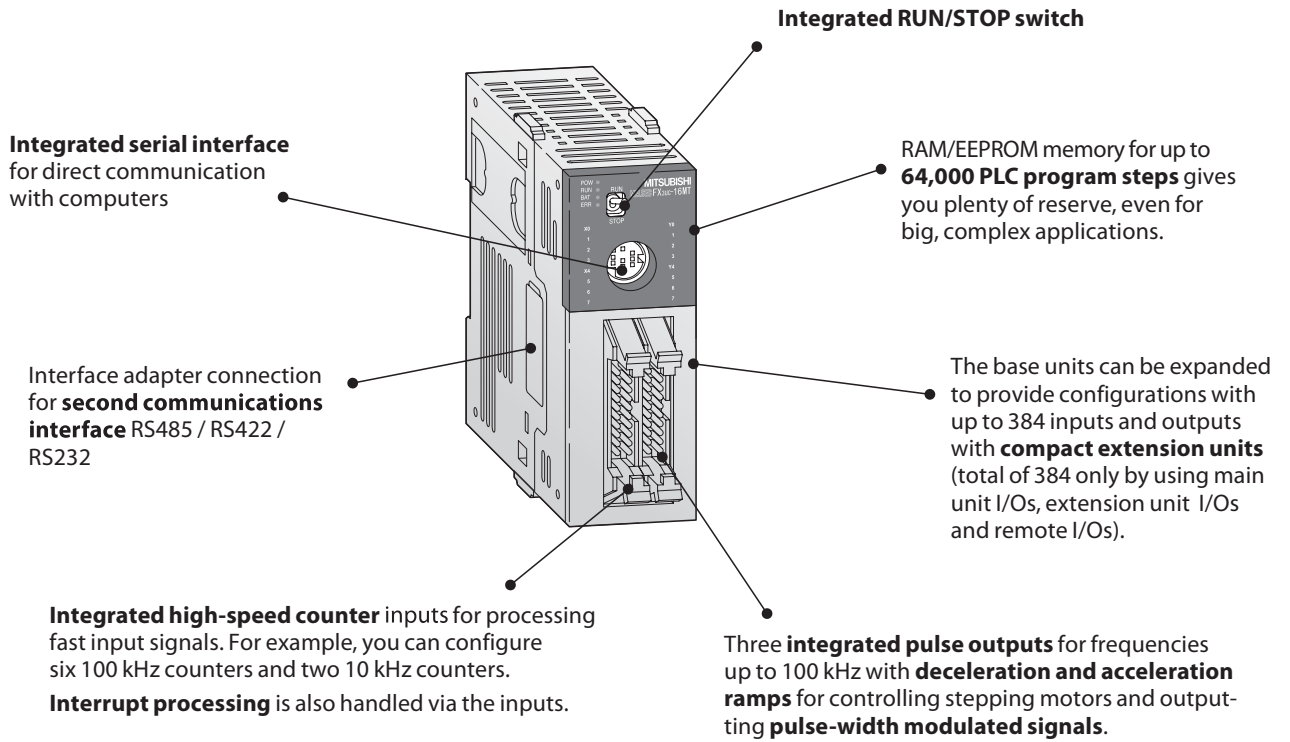
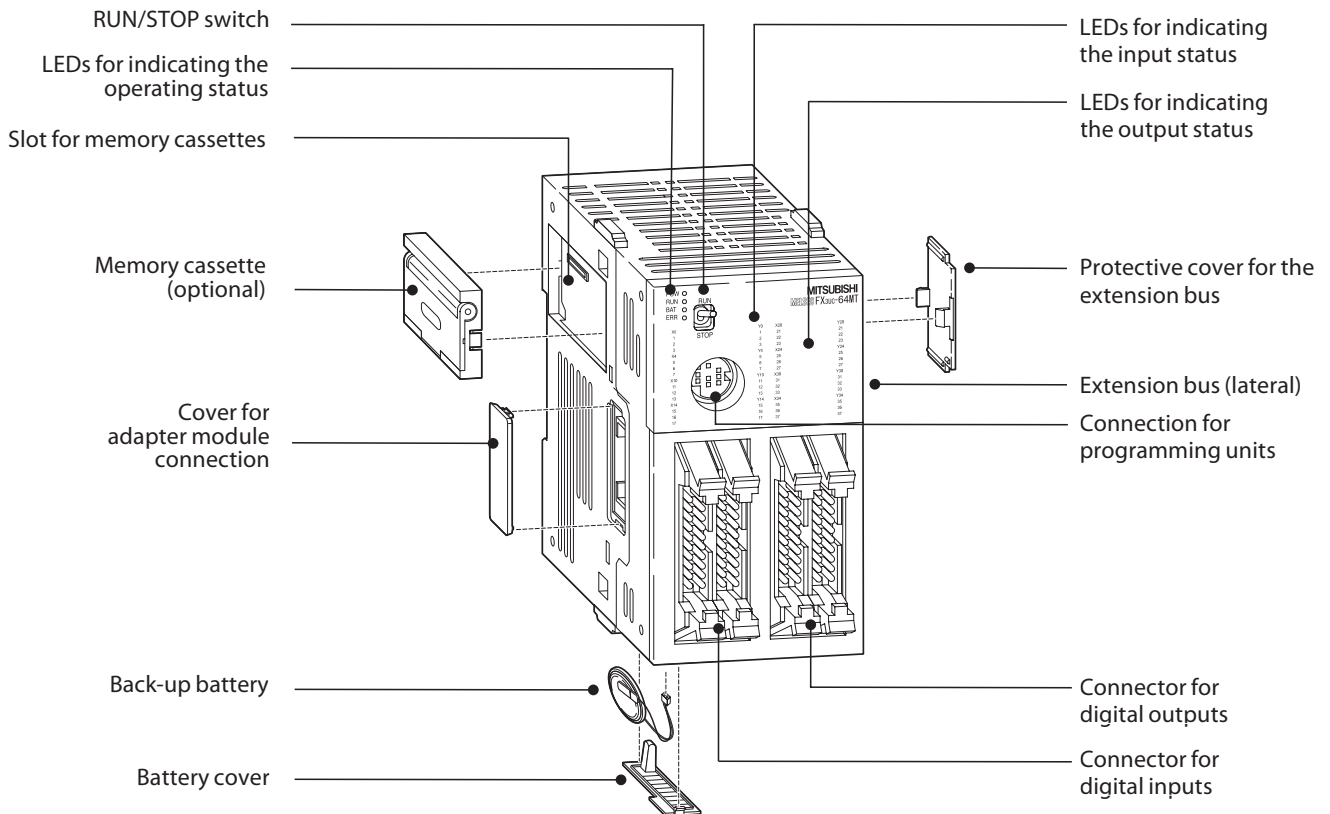


The MELSEC FX3UC Series

2
FX BASE UNITS

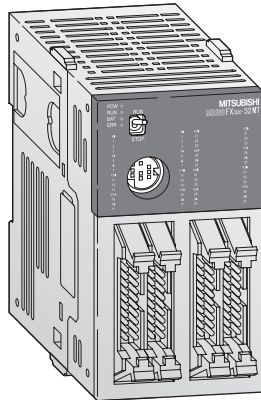


Description of the Unit Components



■ Base Units

FX1S FX1N FX3G FX3U FX3UC



Base Units FX3UC

The FX3U series base units are available with 16, 32, 64 or 128 input/output points (expandable to 384 I/Os). It is possible to choose between relay and transistor output type.

Special Features:

- Integrated serial interface for communication between PCs and HMI
- Same instruction set as FX3U
- Integrated positioning control
- Very compact dimensions
- LEDs for indicating the input and output status
- Slot for memory cassette
- Adapter modules and system cabling sets available for units with ribbon cable connectors
- Expandable with digital I/O modules, special function modules and ADP modules
- User-friendly programming systems, including IEC 1131.3 (EN 61131.3) compatible programming software, HMIs and hand-held programming units

2

FXBASE UNITS

Base Units with 16–96 I/Os

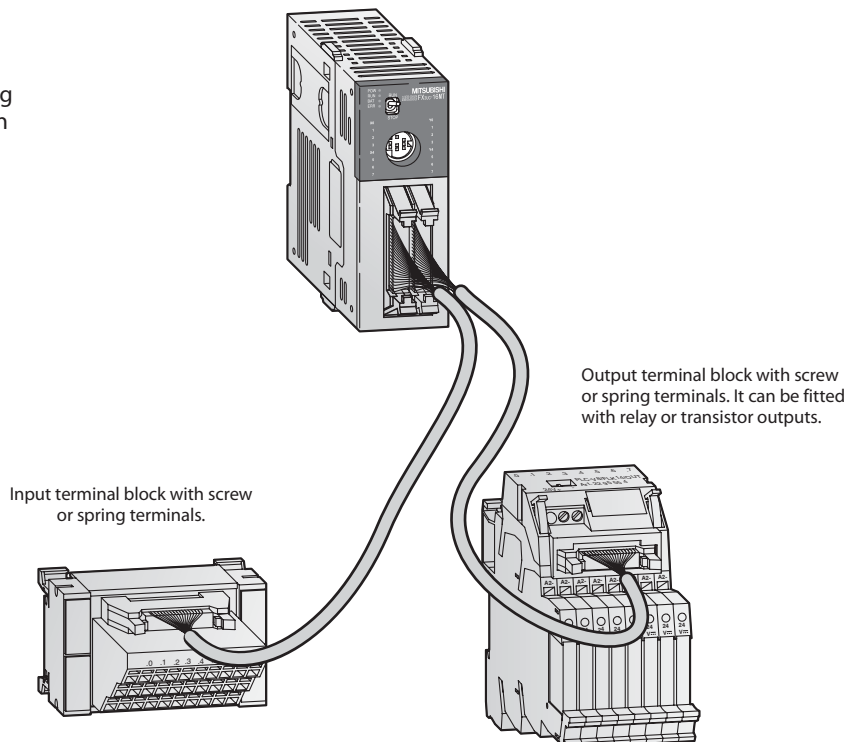
| Specifications | FX3UC-16 MT/DSS | FX3UC-32 MT/DSS | FX3UC-64 MT/DSS | FX3UC-96 MT/DSS |
|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Integrated inputs/outputs | 16 | 32 | 64 | 96 |
| Power supply | 24 V DC (+20 %, -15 %) | 24 V DC (+20 %, -15 %) | 24 V DC (+20 %, -15 %) | 24 V DC (+20 %, -15 %) |
| Integrated inputs | 8 | 16 | 32 | 48 |
| Integrated outputs | 8 | 16 | 32 | 48 |
| Output type | Transistor (source type)* | Transistor (source type)* | Transistor (source type)* | Transistor (source type)* |
| Power consumption | W 6 | 8 | 11 | 14 |
| Weight | kg 0.2 | 0.2 | 0.3 | 0.35 |
| Dimensions (WxHxD) | mm 34x90x74 | 34x90x74 | 59.7x90x74 | 85.4x90x74 |
| Order information | Art. no. 231508 | 231509 | 231510 | 231511 |

* Sink type transistor output units on request.

System Cabling

A choice of terminal blocks with screw or spring terminals are available for easy wiring of the FX3UC modules with standard ribbon cable connectors.

For more details please refer to the "Accessories" section in this catalogue.



■ Base Units □ FX1S □ FX1N □ FX3G □ FX3U FX3UC

Environmental Specifications

| General specifications | Data |
|------------------------------|--|
| Ambient temperature | 0–55 °C (storage temperature: –25–+75 °C) |
| Protection | IP10 |
| Noise durability | 1000 Vpp with noise generator; 1 μs at 30–100 Hz |
| Dielectric withstand voltage | AC PSU: 1500 V AC, 1 min./DC PSU: 500 V AC, 1 min. |
| Ambient relative humidity | 5–95 % (non-condensing) |
| Shock resistance | Acc. to IEC 68-2-27: 15G (3 times each in 3 directions for 11 ms) |
| Vibration resistance | Acc. to IEC 68-2-6: 1G (resistance to vibrations from 57–150 Hz for 80 minutes along all 3 axes); 0.5G for DIN rail mounting |
| Insulation resistance | 500 V DC, 5 MW |
| Ground | Class D: Grounding resistance 100 W or less |
| Environment | Avoid environments containing corrosive gases, install in a dust-free location. |
| Certifications | Please refer to pages 66–67 in this catalogue |

Electrical Specifications

| Power supply specifications | All modules |
|--|-----------------------|
| Power supply | 24 V DC (+20 %/-30 %) |
| Inrush current at ON | — |
| Allowable momentary power failure time | 5 ms |
| Primary power supply | 24 V DC |
| External power supply (24 V DC) | — |

| Output specifications | All modules | |
|---|------------------|--|
| Switching voltage (max.) | V | 5–30 V DC |
| Max. output current | - per output | A 0.1/0.3 ^① |
| | - per group* | A 0.8/1.6 |
| Max. switching current | - inductive load | 2.4 W/7.2 W ^② |
| Response time | ms | <0.2 (Y0, Y1 <30 μs) |
| Life of contacts (switching times) ^{③ ③} | | 3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA |

^① for Y0 and Y1 = 0.3 A; all others 0.1 A ^② 7.2 W for Y0 to Y3, all other outputs 2.4 W

^③ Not guaranteed by Mitsubishi Electric.

* This limitation applies only per reference terminal for each group, 4 and 8 outputs for relays and 2 and 4 outputs for transistors. Please observe the terminal assignments for the group identification.

Programming Specifications

| System specifications | FX3UC |
|------------------------|--|
| Program data | |
| I/O points (addresses) | Max. total 384 (with remote I/O) |
| Address range | Max. 256 direct addressing and max. 256 network I/Os |
| Program memory | 64,000 steps RAM (internal), exchangeable FLROM for easy program exchange |
| Cycle period | 0.065 μs/basic instruction |
| Number of instructions | 27 sequence instructions, 2 step ladder instructions, 209 applied instructions |
| Programming language | Step ladder, instruction list, SFC |
| Program execution | Cyclical execution, refresh mode processing |
| Program protection | Password protection with 3 protection levels* |

* Protection levels may only be changed with FX-30P.

| System specifications | FX3UC |
|--------------------------|---|
| Operands | |
| Internal relays | 7,680 |
| Special relays | 512 |
| State relays | 4,096 |
| Timer | 512 |
| Counter | 235 |
| High-speed counter | 16 |
| High-speed counter speed | 1 phase, 8 points max: 100 kHz/6 points 10 kHz/2 points 2 phase, 2 points max: 50 kHz/2 points |
| Real-time clock | Year, month, day, hour, minute, second, weekday |
| Data register | 8,000 |
| Extension file register | 32768 |
| Index register | 16 |
| Special register | 512 |
| Pointer | 4,096 |
| Nestings | 8 |
| Interrupt inputs | 6 |
| Constants | 16 bits: K: -32768 to +32768, hex: 0–FFFF; 32 bits: K: -2147483648 to +2147483647; hex: 0–FFFF FFFF |