

[Home](#) > [Products](#) > [PLCs](#) > MicroSmart

Micro PLCs MicroSmart



Overview

IDEC MicroSmart series PLC is the next generation of programmable logic controller. These flexible, adaptable PLCs are as compact as they are powerful, so you can create the system you need without increasing your space requirements or your budget.

MicroSmart CPUs are available with built-in 10, 16, and 24 I/O All-In-One units, and 20 and 40 I/O slim style models.

Each MicroSmart CPU is designed in a compact and rugged housing. Every MicroSmart module meets IDEC strict quality standards and complies with all major international standards; cULus, CE, TUV, and Lloyds.

Each CPU is equipped with a standard power supply circuit, four high-speed counters, analog potentiometer, and password protection.

The Slim type and the 24 I/O All-in-one CPU can be expanded with the many choices of expansion

modules. There are 20 modules available including four analog I/O modules, an AS-interface master communication module, and our most recent addition to the MicroSmart family, the 8-pt AC input module. In addition, 24V DC All-in-one CPUs are now available. Depending upon the CPU, you can create a system with as many as 264 I/Os.

Each MicroSmart module can be enhanced with a memory cartridge for easy maintenance, a real-time clock and calendar cartridge for real time applications, and an RS-485/RS-232 communications adapter. These adapters allow the MicroSmart CPU to data link to the MicroSmart or other IDEC PLCs, connect to operator interfaces, printers, barcode readers, or other RS-232 devices such as modems for remote communication.

MicroSmart PLCs are programmable with WindLDR, IDEC's intuitive ladder logic software. The current WindLDR version 5.03 has improved features such as a split ladder window for easy navigation, improved tag name editor and rung comment search. Download your free demo now or upgrade to WindLDR 5.03 if you have version 4.0 or later.

Key Features

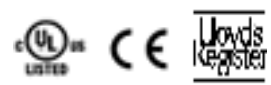
- Available in Slim or All-In-One styles
- CPU units are equipped with 10, 16, 20, 24, or 40 I/Os.
- Maximum of 264 I/Os can be configured on a single MicroSmart CPU
- Your choice of many expansion modules: AC/DC inputs, relay/transistor outputs, RTD/ Thermocouple and Analog I/Os, and AS-interface Master communication module
- Standard RS232 port, optional plug-in RS485/RS232 port for data link or modem communications
- Optional plug-in HMI module for monitoring, memory cartridge, and real-time clock and calendar cartridge
- Built in Modbus-CRC, PID and Ramp functions
- 4 built-in high speed counters, interrupt and catch inputs, and password protection
- Data link for up to 32 MicroSmart or other IDEC PLCs
- cULus, CE, TUV and Lloyds approved
- Approved for Class 1 Div 2 Hazardous Locations
- Easy programming using IDEC exclusive WindLDR software
- New web server module for faster, easier ethernet connectivity

MicroSmart Series

FC4A-C24R2

[The MicroSmart is available in either Slim type or the All-In-One type with expandability up to 264 I/O.]





Product Specifications

| | |
|------------------------------|------------------|
| PLC Product Category | CPU Unit |
| Operating Voltage | 120V AC, 240V AC |
| Maximum PID Loops | 8 |
| High Speed Counter(s) | 20kHz, 5kHz |

High Speed Counter Input Type Sink, Source

RS485 Ports 1, Separate Module Required

On Board Communication Port 1 RS-232

Memory Card Slot Yes

On Board Input Type Transistor Sink, Transistor Source

On Board Output Type Relay

I/O Expandable Yes

Maximum I/O 88

On Board I/O 14/10

Real Time Clock Yes, Separate Module Required

Connector Type Screw Terminal

Notes MicroSmart All-in-One Brick Style PLC. Expandable I/O cards purchased separately. See catalog pages for further information.

I/O Range Requirement 24 or less, 25-88

Floating Point Math No

Data Processing 16 Bit

Max. Communication Ports 1, 2

Maximum Analog Points 8 Input / 4 Output

MicroSmart Performance

Features:

- Available in 10, 16, 20, 24, and 40 I/O CPUs.
- PID Controls
 - Program up to 14 PID loops
- High Speed I/O
 - Built-in 4 high speed inputs
 - Single or Dual Phase
 - Max. 20KHz frequency
- Built-in 2 High speed outputs (Slim model only)
- Configure up to 264 I/O Points
- Data link up to 32 MicroSmart and Pentra CPUs
- Using RS485 communication module/port, you can create a network of up to 32 CPUs.
- Worldwide Approvals
 - cULus listed, CE marked
 - Class 1 Div. 2 for hazardous locations
 - Lloyds Registered and ABS approved for shipping industry



PLCs

Operator Interfaces

Automation Software

Power Supplies

Sensors

Communication & Networking

MicroSmart CPU Part Numbers

All-in-One

| Appearance | Part Number | Power | I/O Points | Input | Output | Expandability | |
|------------|-------------|-------------|--------------------|----------------------|--------|---------------|--|
| | FC4A-C10R2C | 24V DC | 10 (6 in/ 4 out) | | | N/A | |
| | FC4A-C10R2 | 100-240V AC | | | | | |
| | FC4A-C16R2C | 24V DC | 16 (9 in/ 7 out) | 24V DC (Sink/Source) | Relay | | |
| | FC4A-C16R2 | 100-240V AC | | | | | |
| | FC4A-C24R2C | 24V DC | 24 (14 in/ 10 out) | | | | 88 Maximum I/O (up to 4 expansion modules) |
| | FC4A-C24R2 | 100-240V AC | | | | | |

Specifications

All-in-One

| Part Number | AC Power | FC5A-C10R2 | FC5A-C16R2 | FC5A-C24R2 | FC4A-C10R2 | FC4A-C16R2 | FC4A-C24R2 |
|--|---|--|--|----------------------------------|----------------------------------|--|-------------|
| | DC Power | FC5A-C10R2C | FC5A-C16R2C | FC5A-C24R2C | FC4A-C10R2C | FC4A-C16R2C | FC4A-C24R2C |
| Rated Voltage | AC power model: 100 to 240V AC, DC power model: 24V DC | | | | | | |
| Allowable Voltage Range | AC power model: 85 to 264V AC, DC power model: 20.4 to 28.8V DC (including ripple) | | | | | | |
| Rated Power Frequency | AC power model: 50/60 Hz (47 to 63 Hz) | | | | | | |
| Maximum Input Current | 250mA (85V AC) 160mA (24V DC) | 300mA (85V AC) 190mA (24V DC) | 450mA (85V AC) ¹ 360mA (24V DC) ² | 250mA (85V AC) 160mA (24V DC) | 300mA (85V AC) 190mA (24V DC) | 450mA (85V AC) ² 360mA (24V DC) ³ | |
| Maximum Power Consumption | AC Power | FC5A-C10R2/FC4A-C10R2: 30VA (264V AC) / 20VA (100V AC) ³ FC5A-C16R2/FC4A-C16R2: 31VA (264 V AC) / 22VA (100V AC) ³ FC5A-C24R2/FC4A-C24R2: 40VA (264V AC) / 33VA (100V AC) ¹ | | | | | |
| | DC Power | FC5A-C10R2C/FC4A-C10R2C: 3.9W (24V DC) ⁴ FC5A-C16R2C/FC4A-C16R2C: 4.6W (24V DC) ⁴ FC5A-C24R2C/FC4A-C24R2C: 8.7W (24V DC) ² | | | | | |
| Allowable Momentary Power Interruption | 10ms (rated power voltage) | | | | | | |
| Dielectric Strength | Between power and ⊕ or ⊖ terminals: 1500V AC, 1 minute Between I/O and ⊕ or ⊖ terminals: 1500V AC, 1 minute | | | | | | |
| Insulation Resistance | Between power and ⊕ or ⊖ terminals: 10 MΩ minimum (500V DC megger) Between I/O and ⊕ or ⊖ terminals: 10 MΩ minimum (500V DC megger) | | | | | | |
| Noise Resistance | AC power terminals: 1.5 kV, 50 ns to 1μs DC power terminals: 1.0 kV, 50 ns to 1μs I/O terminals (coupling clamp): 1.5 kV, 50 ns to 1μs | | | | | | |
| Inrush Current | | 35A | 40A | 35A | 40A | | |
| Power Supply Wire | UL1015 AWG22, UL1007 AWG18 | | | | | | |
| Operating Temperature | 0 to 55°C | | | | | | |
| Storage Temperature | -25 to +70°C (no freezing) | | | | | | |
| Relative Humidity | Level RH1 (IEC61131-2), 1 to 95% RH (no condensation) | | | | | | |
| Altitude | Operation: 0 to 2,000m, Transport: 0 to 3,000m | | | | | | |
| Pollution Degree | 2 (IEC60664-1) | | | | | | |
| Corrosion Immunity | Free from corrosive gases | | | | | | |
| Degree of Protection | IP20 (IEC60529) | | | | | | |
| Grounding Wire | UL1007, AWG16 | | | | | | |
| Vibration Resistance | When mounted on a DIN rail or panel surface: 5 to 9 Hz amplitude 3.5 mm, 9 to 150 Hz acceleration 9.8 m/s ² (1G), 2 hours per axis on each of three mutually perpendicular axes (IEC61131-2) | | | | | | |
| Shock Resistance | 147 m/s ² (15G), 11ms duration, 3 shocks per axis, on three mutually perpendicular axes (IEC61131) | | | | | | |
| Weight | AC: 230g DC: 240g | AC: 250g DC: 260g | AC: 305g DC: 310g | AC: 230g DC: 240g | AC: 250g DC: 260g | AC: 305g DC: 310g | |

1. CPU module (including 250mA sensor power) + 4 I/O modules
2. CPU module + 4 I/O modules
3. CPU module (including 250mA sensor power)
4. CPU module (24V DC)

PLCs

Operator Interfaces

Automation Software

Power Supplies

Sensors

Communication & Networking

All-in-One

| Part Number | | FC5A-C10R2 FC5A-C10R2C | FC5A-C16R2 FC5A-C16R2C | FC5A-C24R2 FC5A-C24R2C | FC4A-C10R2 FC4A-C10R2C | FC4A-C16R2 FC4A-C16R2C | FC4A-C24R2 FC4A-C24R2C |
|--|--|--|---------------------------|---------------------------|---|---------------------------|---------------------------|
| Control System | | Stored program system | | | | | |
| Instruction Words | | 35 basic | | | | | |
| Program Capacity ¹ | | 13.8 KB (2,300 steps) | 27 KB (4,500 steps) | 54 KB (9,000 steps) | 4.8 KB (800 steps) | 15 KB (2,500 steps) | 27 KB (4,500 steps) |
| User Program Storage | | EEPROM (10,000 times rewritable) | | | | | |
| Processing Time | Basic Instruction | 1.16ms (1,000 steps) | | | 1.65ms (1,000 steps) | | |
| | END Processing ² | 0.64ms | | | 0.64ms | | |
| Expandable I/O Module | | — | | 4 modules | | — | |
| I/O Points | Input | 6 | 9 | 14 | Expansion: 64 | 6 | 9 |
| | Output | 4 | 7 | 10 | | 4 | 7 |
| Internal Relay | | 2,048 points | | 256 points | | 1,024 points | |
| Shift Register | | 128 points | | 64 points | | 128 points | |
| Data Register | | 2,000 points | | 400 points | | 1,300 points | |
| Extra Data Register | | — | | — | | — | |
| Counter | | 256 points | | 32 points | | 100 points | |
| Timer (1-sec, 100-ms, 10-ms, 1-ms) | | 256 points | | 32 points | | 100 points | |
| RAM Backup | Backup Data | Internal relay, shift register, counter, data register | | | | | |
| | Backup Duration | Approx. 30 days (typical) at 25°C after backup battery fully charged | | | | | |
| | Battery | Lithium secondary battery | | | | | |
| | Charging Time | Approx. 15 hours for charging from 0% to 90% of full charge | | | | | |
| | Battery Life | 5 years | | | | | |
| | Replaceability | N/A | | | | | |
| Self-diagnostic Function | | Power failure, watchdog timer, data link connection, user program EEPROM sum check, timer/counter preset value sum check, user program RAM sum check, keep data, user program syntax, user program writing, CPU module, clock IC, I/O bus initialize, user program execution | | | | | |
| Input Filter | | Without filter or 3 to 15ms filter (selectable in increments of 1ms) | | | | | |
| Catch Input/Interrupt Input | | Four inputs (I2 through I5) Minimum turn on pulse width: 40µs minimum Minimum turn off pulse width: 150µs minimum | | | | | |
| High-speed Counter | Maximum Counting Frequency and High-speed Counter Points | Total 4 points Single/two-phase selectable: 50KHz (1 point) Single-phase: 5KHz (3 points) | | | Total 4 points Single/two-phase selectable: 20KHz (1 point) Single-phase: 5KHz (3 points) | | |
| | Counting Range | 0 to 65535 (16 bits) | | | | | |
| | Operation Mode | Rotary encoder mode and adding counter mode | | | | | |
| Analog Potentiometer | Number | 1 point | | 2 points | | 1 point | |
| | Data Range | 0 to 255 | | | | | |
| Analog Voltage Input | Number | — | | | | | |
| | Input Voltage Range | — | | | | | |
| | Input Impedance | — | | | | | |
| Pulse Output | Data Range | — | | | | | |
| | Number | — | | | | | |
| Sensor Power Supply (AC Power Only) | Max. Frequency | — | | | | | |
| | Output Voltage Current | 24V DC (+10% to -15%), 250mA | | | | | |
| | Overload Detection | N/A | | | | | |
| Isolation | | Isolated from the internal circuit | | | | | |
| Port 1 | | RS232C (maintenance communication, user communication) | | | | | |
| Port 2 Communication Adapter (option) ³ | | Possible | Possible | Possible | — | Possible | Possible |
| Clock Cartridge (option) | | Possible | Possible | Possible | Possible | Possible | Possible |
| Memory Cartridge (option) | | Possible | Possible | Possible | Possible | Possible | Possible |
| HMI Module (option) | | Possible | Possible | Possible | Possible | Possible | Possible |



- 1 step equals 6 bytes.
 - Not including expansion I/O service time, clock function processing time, data link processing time, and interrupt processing time.
 - Maintenance communication, user communication, Modem communication, datalink, Modbus master/slave communication (FC5A only).
- Note: The maximum number of relay outputs that can be turned on simultaneously is 33 including those on the CPU module.

Communication Port (RS232C Port 1)

| Model | Slim CPU | All-in-One CPU |
|---|--|----------------|
| Standards | EIA RS232C | |
| Maximum Baud Rate | FC5A: 57,600 bps (maintenance communication) FC4A: 19,200 bps (maintenance communication) | |
| Maintenance Communication | Possible | |
| User Communication | Possible | |
| Modem Communication | N/A | |
| Data Link | N/A | |
| Cable | Special cable (FC2A-KC4C, FC2A-KP1C, FC4A-KC1C, FC4A-KC2C) | |
| Isolation between Internal Circuit and Communication Port | Not isolated | |

Input Specifications

| Part Number | — | FC5A-D16RK1 FC5A-D16RS1 | — | FC5A-D32K3 FC5A-D32S3 | — | FC5A-C10R2 FC5A-C10R2C | FC5A-C16R2 FC5A-C16R2C | FC5A-C24R2 FC5A-C24R2C |
|---------------------------------------|--|----------------------------------|--|----------------------------------|--------------------------|--|---------------------------|---------------------------|
| | FC4A-D20K3 FC4A-D20S3 | — | FC4A-D20RK1 FC4A-D20RS1 | — | FC4A-D40K3 FC4A-D40S3 | FC4A-C10R2 FC4A-C10R2C | FC4A-C16R2 FC4A-C16R2C | FC4A-C24R2 FC4A-C24R2C |
| Input Points | 12 (12/1 common) | 8 (8/1 common) | 12 (12/1 common) | 16 (8/1 common) | 24 (12/1 common) | 6 (6/1 common) | 9 (9/1 common) | 14 (14/1 common) |
| Input Voltage | 24V DC sink/source input signal | | | | | | | |
| Input Voltage Range | 20.4 to 26.4V DC | | | | | 20.4 to 28.8V DC | | |
| Input Current | FC5A I0, I1, I3, I4, I6, I7: 4.5mA/point (24V DC) I2, I5, I10 to I17: 7mA/point (24V DC) FC4A I0, I1, I6, I7: 5mA/point (24V DC) I2 to I5, I10 to I27: 7mA/point (24V DC) | | | | | FC5A I0 and I1: 6.4mA/point I2 to I7, I10 to I15: 7mA/point (24V DC) FC4A I0 and I1: 11mA I2 to I7, I10 to I15: 7mA/point (24V DC) | | |
| Input Impedance | FC5A I0, I1, I3, I4, I6, I7: 4.9kΩ I2 to I5, I10 to I17: 3.4kΩ FC4A I0, I1, I6, I7: 5.7kΩ I2 to I5, I10 to I17: 3.4kΩ | | | | | FC5A I0 and I1: 3.7kΩ I2 to I7, I10 to I15: 3.4kΩ FC4A I0 and I1: 2.1kΩ I2 to I7, I10 to I15: 3.4kΩ | | |
| Turn ON Time | FC5A I0, I1, I3, I4, I6, I7: 5μs + filter value I2 and I5: 35μs + filter value I10 to I17: 40μs + filter value FC4A I0, I1, I6, I7: 35μs + filter value I2 to I5: 35μs + filter value I10 to I27: 40μs + filter value | | | | | FC5A I0 and I1: 2μs + filter value I2 to I7: 35μs + filter value I6, I7, I10 to I15: 40μs + filter value FC4A I0 and I1: 35μs + filter value I2 to I5: 35μs + filter value I6, I7, I10 to I15: 40μs + filter value | | |
| Turn OFF Time | FC5A I0, I1, I3, I4, I6, I7: 5μs + filter value I2 and I5: 150μs + filter value I10 to I17: 150μs + filter value FC4A I0, I1, I6, I7: 45μs + filter value I2 to I5: 150μs + filter value I10 to I27: 150μs + filter value | | | | | FC5A I0 and I1: 16μs + filter value I2 to I7: 150μs + filter value I6, I7, I10 to I15: 150μs + filter value FC4A I0 and I1: 45μs + filter value I2 to I5: 150μs + filter value I6, I7, I10 to I15: 150μs + filter value | | |
| Connector | On Mother Board | FL26A2MA (Oki Electric Cable) | MC1.5/18-G-3.81BK (Phoenix Contact) | FL26A2MA (Oki Electric Cable) | — | | | |
| | Insertion Durability | 100 times minimum | | | | | — | |
| Isolation | Between input terminals: Photocoupler isolated Internal circuit: Not isolated | | | | | | | |
| Input | Type 1 (IEC61131-2) | | | | | | | |
| External Load for I/O Interconnection | Not needed | | | | | | | |
| Single Determination Method | Static | | | | | | | |
| Effect of Improper Input Connection | Both sinking and sourcing input signals can be connected. If any input exceeding the rated value is applied, permanent damage may be caused. | | | | | | | |
| Cable Length | 3 m in compliance with electromagnetic immunity | | | | | | | |

Transistor Sink and Source Output

| Part Number | — | FC5A-D16RK1 FC5A-D16RS1 | FC5A-D32K3 FC5A-D32S3 |
|--|--|--|-------------------------------|
| | FC4A-D20RK1 FC4A-D20RS1 | — | FC4A-D40K3 FC4A-D40S3 |
| Output Points | 2 (2/1 common) | 2 (2/1 common) | 16 (8/1 common) |
| Output | Transistor Sink | FC5A-D16K1/D32K3 FC4A-D20K3/D20RK1/D40K3 | |
| | Transistor Source | FC5A-D16RS1/D32S3 FC4A-D20S3/D20RS1/D40S3 | |
| Load Voltage | 24V DC | | |
| Operating Load Voltage Range | 20.4 to 28.8V DC | | |
| Load Current | 0.3A per output point | | |
| Maximum Load Current | 1A per common | | |
| Voltage Drop (ON Voltage) | 1V maximum (voltage between COM and output terminals when output is on) | | |
| Inrush Current | 1A | | |
| Leakage Current | 0.1mA maximum | | |
| Clamping Voltage | 39V±1V | | |
| Maximum Lamp Load | 8W | | |
| Inductive Load | L/R = 10ms (28.8V DC, 1 Hz) | | |
| External Current Draw | Sink output: 100mA maximum, 24V DC (power voltage at the +V terminal) Source output: 100mA maximum, 24V DC (power voltage at the -V terminal) | | |
| Isolation | Between output terminal and internal circuit: Photocoupler isolated Between output terminals: Not isolated | | |
| Connector on Mother Board | FL26A2MA (Oki Electric Cable) | MC1.5/16-G-3.81BK (Phoenix Contact) | FL26A2MA (Oki Electric Cable) |
| Connector Insertion/Removal Durability | 100 times minimum | | |
| Output Delay | Turn ON Time | FC5A Q0 to Q2: 5µs max. Q3 to Q7, Q10 to Q17: 300µs max. FC4A Q0, Q1: 5µs max. Q2 to Q7, Q10 to Q17: 300µs max. | |
| | Turn OFF Time | FC5A Q0 to Q2: 5µs max. Q3 to Q7, Q10 to Q17: 300µs max. FC4A Q0, Q1: 5µs max. Q2 to Q7, Q10 to Q17: 300µs max. | |

Relay Output

| Part Number | FC5A-C10R2 FC5A-C10R2C | FC5A-C16R2 FC5A-C16R2C | FC5A-C24R2 FC5A-C24R2C | FC5A-D16RK1 FC5A-D16RS1 | |
|--|--|---------------------------|---------------------------|----------------------------|-----------------------|
| | FC4A-C10R2 FC4A-C10R2C | FC4A-C16R2 FC4A-C16R2C | FC4A-C24R2 FC4A-C24R2C | FC4A-D20RK1 FC4A-D20RS1 | |
| No. of Outputs | 4 | 7 | 10 | 8 | |
| Output Points per Common Line | COM0 | 3 | 4 | 4 | 2 (Transistor output) |
| | COM1 | 1 | 2 | 4 | 3 |
| | COM2 | — | 1 | 1 | 2 |
| | COM3 | — | — | 1 | 1 |
| Output | 1 NO form A | | | | |
| Maximum Load Current | 2A per point 8A per common line | | | | |
| Minimum Switching Load | 0.1mA/0.1V DC (reference value) | | | | |
| Initial Contact Resistance | 30 mΩ maximum | | | | |
| Electrical Life | 100,000 operations minimum (rated load 1,800 operations/hour) | | | | |
| Mechanical Life | 20,000,000 operations minimum (no load 18,000 operations/hour) | | | | |
| Rated Load | 240V AC/2A (resistive load, inductive load cos φ = 0.4) 30V DC/2A (resistive load, inductive load L/R = 7ms) | | | | |
| Dielectric Strength | Between output and terminals: 1,500V AC, 1 minute Between output terminal and internal circuit: 1,500V AC, 1 minute Between output terminals (COMs): 1,500V AC, 1 minute | | | | |
| Connector on Mother Board | — | | | * | |
| Connector Insertion/Removal Durability | — | | | 100 times minimum | |



*MC1.5/16-G-3.81BK (Phoenix Contact)

PLCs

Operator Interfaces

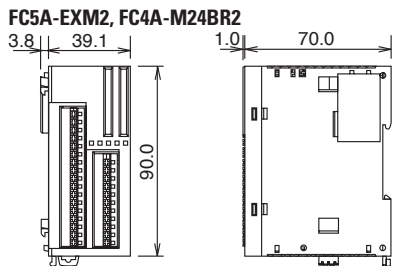
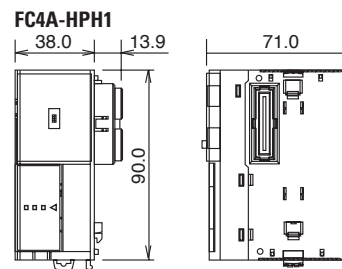
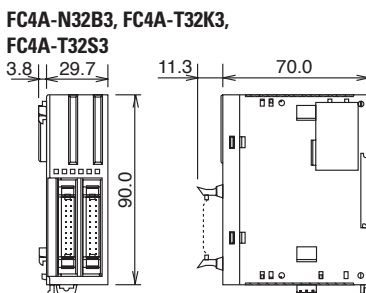
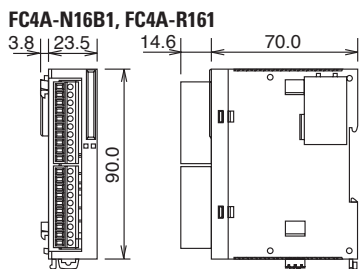
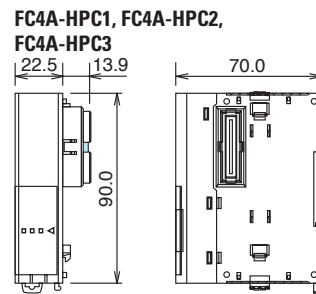
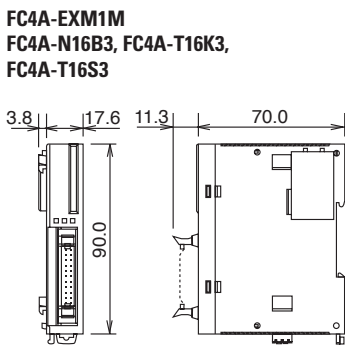
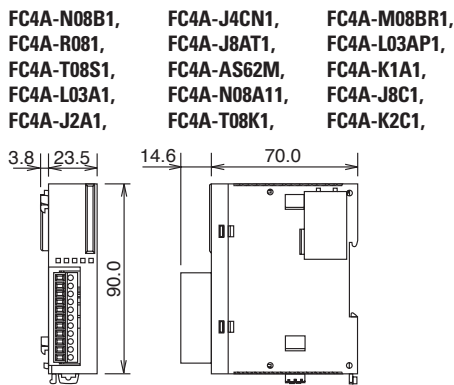
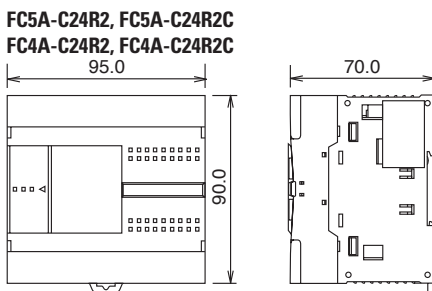
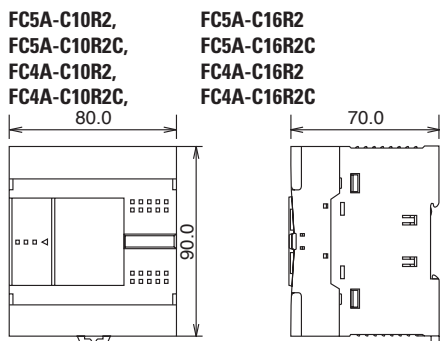
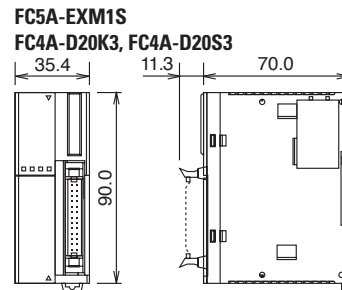
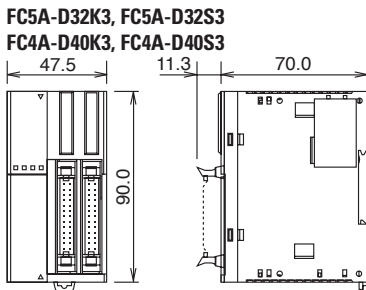
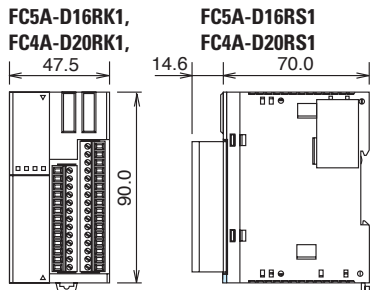
Automation Software

Power Supplies

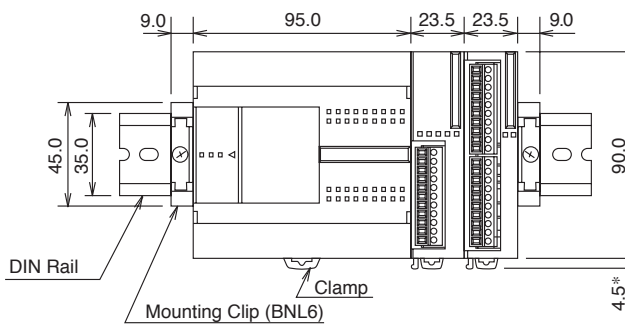
Sensors

Communication & Networking

Dimensions (mm)



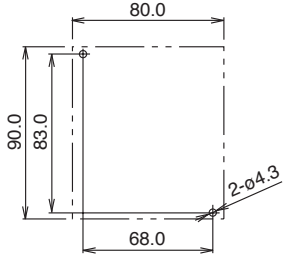
Example



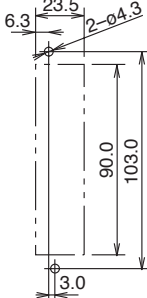
The figure illustrates a system setup consisting of the all-in-one 24-I/O CPU module, an 8-point relay output module, and a 16-point DC input module mounted on a 35-mm-wide-DIN rail using BNL6 mounting clips.

Mounting Hole Layout (mm)

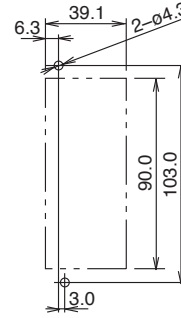
FC5A-C10R2, FC5A-C16R2
 FC5A-C10R2C, FC5A-C16R2C
 FC4A-C10R2, FC4A-C16R2
 FC4A-C10R2C, FC4A-C16R2C



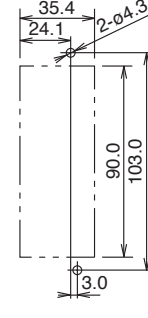
FC4A-N08A11, FC4A-R081
 FC4A-R161, FC4A-T08K1
 FC4A-T08S1, FC4A-M08BR1
 FC4A-L03A1, FC4A-L03AP1
 FC4A-J2A1, FC4A-K1A1
 FC4A-J4CN1, FC4A-T8C1
 FC4A-J8AT1, FC4A-K2C1



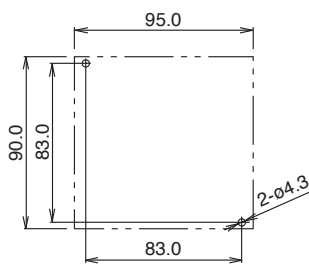
FC5A-EXM2
 FC4A-M24BR2



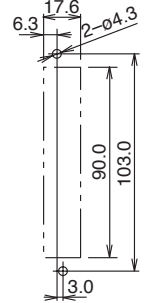
FC5A-EXM1S, FC4A-D20K3
 FC4A-D20S3



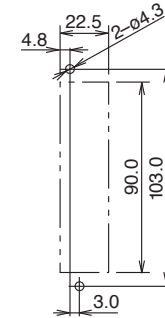
FC5A-C24R2, FC4A-C24R2C
 FC4A-C24R2, FC4A-C24R2C



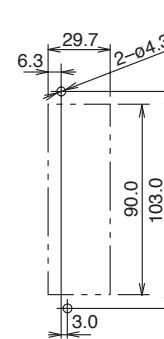
FC5A-EXM1M
 FC4A-N16B3, FC4A-T16K3,
 FC4A-T16S3



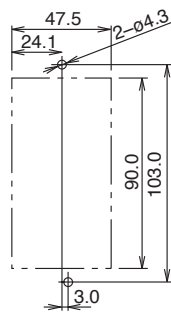
FC4A-HPC1 FC4A-HPC2
 FC4A-HPC3



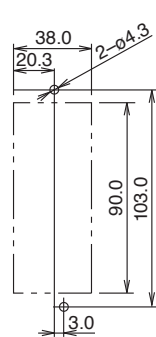
FC4A-N32B3, FC4A-T32K3,
 FC4A-T32S3



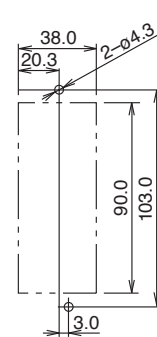
FC5A-D16RK1
 FC5A-D16RS1
 FC5A-D32K3
 FC5A-D32S3
 FC4A-D20RK1
 FC4A-D20RS1
 FC4A-D40K3
 FC4A-D40S3



FC4A-HPH1

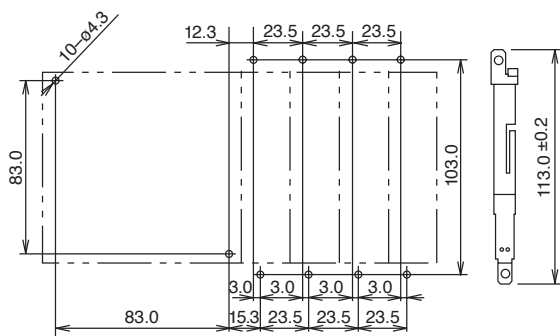


FC4A-HPH1

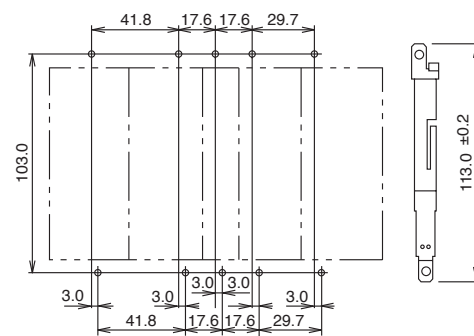


Examples

Mounting hole layout for FC5A-C24R2 or FC4A-C24R2 and four 23.5mm-wide I/O modules



Mounting hole layout from left, FC4A-HPH1, FC4A-D20K3, FC4A-N16B3, FC4A-N32B3, and FC4A-M24BR2 modules



Web Server

General Specifications

| | |
|---|--|
| Rated Power Voltage | 24V DC |
| Allowable Voltage Range | 20.4 to 26.4V DC |
| Current Draw | 70 mA |
| Allowable Momentary Power Interruption | 10 ms maximum |
| Dielectric Strength | 500V AC, 1 minute |
| Insulation Resistance | 10 MΩ minimum (500V DC megger) |
| Noise Resistance | DC power terminal: 1.0 kV, 50 ns to 1 μs Ethernet cable: 0.5 kV, 50 ns to 1 μs (coupling clamp) |
| Inrush Current | 4A maximum |
| Operating Temperature | 0 to 55°C |
| Storage Temperature | -40 to +70°C (no freezing) |
| Relative Humidity | 10 to 95% (no condensation) |
| Pollution Degree | 2 (IEC 60664-1) |
| Corrosion Immunity | Free from corrosive gases |
| Degree of Protection | IP20 (IEC60529) |
| Vibration Resistance | When mounted on a DIN rail: 5 to 9 Hz amplitude 3.5 mm 9 to 150 Hz acceleration 9.8 m/s ² (1G) 2 hours in each of 3 axes |
| Shock Resistance | 147 m/s ² (15G), 11 ms duration 3 shocks each in 3 axes |
| Weight (approx.) | 150g |

Interface Specifications

| | |
|--|--|
| Communication | RS232C <=> Ethernet conversion function |
| Ethernet Specifications | Electrical characteristics: Complies with IEEE802.3 Transmission speed: 10BASE-T/100BASE-TX (Not CE compliant) Communication protocol: IP/ICMP/ARP Ethernet protocol: TCP/SMTP/HTTP/Telnet No. of TCP connections: 1 |
| Serial Interface Specifications | Electrical characteristics: EIA RS232C Transmission speed: 9600 to 115200 bps Synchronization: Asynchronous Communication protocol: Full duplex Transmission control: RTS/CTS, XON/OFF, None |
| Connection Method | Ethernet interface: RJ45 Serial interface: Mini DIN 8-pin connector Cable Part No.: FC4A-KC3C |
| Major Functions | Remote maintenance: Uploading, downloading and monitoring using WindLDR via Ethernet Web server: Configure the web server unit using Internet Explorer etc. Reading and writing PLC operands using Java applet. Web file area: 512 KB Compliant browser: Internet Explorer 6.0 or higher, Netscape Navigator 7.2 Ethernet user communication: User communication using Ethernet Message transmission: Registered outgoing message 32 message types, 63 characters maximum per message, 2 email addresses, 64 address characters maximum |
| Optional | Utility CD: Configuration file, PLC operand monitor sample programs, sample program configuration instructions, instruction manual (English/German/Spanish/Japanese/Chinese) |

Connectable Devices

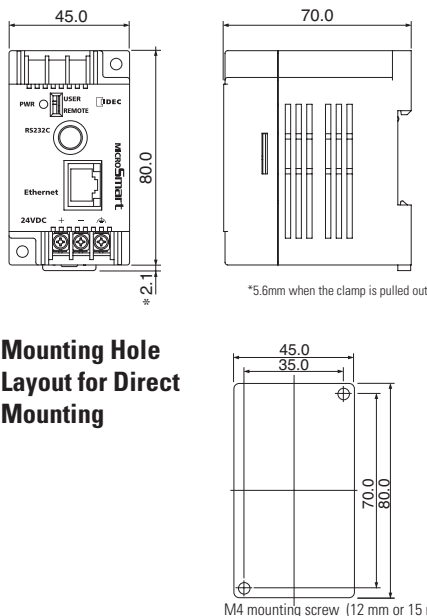
Programmable Controllers

IDEC FC5A MicroSmart
IDEC FC4A MicroSmart
IDEC FC3A OpenNet Controller

Operator Interface

(RS232C communication with PLC through Ethernet)
IDEC HG2F

Dimensions

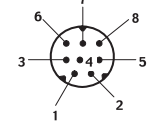


Web Server Cable (FC4A-KC3C, Cable Length: 100 mm)

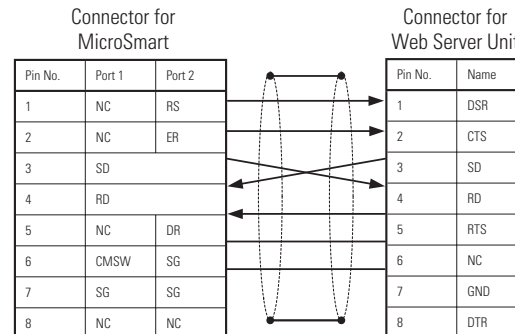
Cable Dimensions



Connector Pinout



Cable Connection Diagram



Ethernet is a registered trademark of Xerox Corporation.