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Mitsubishi PLC range overview



Function/ Logic blocks	Compact PLC				
	Entry Level	Mid-range	High-end	Premium	
Compact, basic controller for simple machines and building automation	Ideal for stand-alone machines and simple automation tasks	Compact range of PLCs with expansion and network capabilities, ideal for performance critical applications	Suitable for more complex or high speed machines, possibly utilising motion controllers	Enables us to develop more complex and sophisticated automation systems.	
Alpha Page 302 	FX3s Page 303 	FX3G Page 304  FX3GC Page 306  FX3GE Page 305 	FX3U Page 307  FX3UC Page 308 	FX5U Page 309  <small>MELSEC iQ F</small>	
Up to 24 AS-interface	10 to 30 Modbus/Ethernet	14 to 128 CC-Link/Modbus/Ethernet	16 to 256 CC-Link/Modbus/Ethernet/SSCNETIII	32 to 512 CC-Link/Modbus/Ethernet/SSCNETIII	

Alpha Logic Block

Alpha fills the gap between traditional relays and a PLC, offering functionality and flexibility but without unnecessary costs.

Alpha is capable of controlling new processes from the start and can process up to 200 function blocks in a single program. Available functions include; timer, counter, analogue signal processor, calendar and clock.

Suitable for:

- Pump controllers
- Handling systems
- Door, gate and window controllers
- Heating, lighting & ventilation systems
- Alarm and security systems

FX family – the world's best selling PLC range

For over 30 years, Mitsubishi has been the leader in the compact PLC market, selling over 10 million FX controllers worldwide.

With compact dimensions and low cost, FX opens up new applications which can now benefit from the many advantages of these controllers. FX5 is the fourth generation family of Mitsubishi compact PLCs, again setting new standards - and not only in the compact controllers class. In fact, FX5 PLCs can now deliver the type of performance that was previously only found in much larger control systems.

Worldwide compatibility

With a range of power supplies and international standard approvals, FX PLCs can be used all over the world.

Flexible solutions

Expansion & special function modules can be used to configure a system to suit your specific application.

Simple programming

Complex functions can be combined & executed with a single instruction.

Compatibility

Each PLC in the FX family is different & an independent product, but they are still compatible with each other.

Mitsubishi PLC range overview



Modular Compact PLC

Powerful, compact modular controller with cost effective motion control options



L-series
Page 315

Integrated Modular PLC

A range of controllers for next generation automation environments



MELSEC **i-QR**

i-QR-series
Page 318

Modular PLC

Expandable PLC capable of even the biggest process control tasks



Q-series
Page 320

Q-series Safety
Page 322

24 to 4096

CC-Link/CC-Link IE/
Ethernet/SSCNETIII

Up to 4096

CC-Link/CC-Link IE Field/
Modbus/ProfiNet/ProfiBus/
CANOpen/DeviceNet/Ethernet

Up to 8192

CC-Link/CC-Link IE/
ProfiBus/Modbus/Ethernet/
AS-interface/DeviceNet

I/O

Network options

Mitsubishi L-series

L-series is a powerful, mid-range modular controller with a great range of features built-in to the CPU, including Ethernet and mini-USB connectivity.

The CPU can also be supplemented with up to 10 extension and special function modules for additional digital and analogue I/Os, highspeed counters, communications, simple motion etc.

The compact size, easy expandability, networking capabilities, and multitude of built-in high-powered functions makes the L-series ideal for stand-alone or larger network applications.

NEW

Mitsubishi i-QR-series

MELSEC i-Q-R series solves common problems in seven key areas: Productivity, engineering, maintenance, quality, connectivity, security and compatibility.

With improvements in performance it not only enables users to realise enhanced system designs, but also provides the basis for significant reduction in hardware costs.

The i-Q-R series offers reductions in development cost, maintenance cost and risk of system failure, while providing an innovative upgrade path enabling users to take advantage of ongoing developments through software upgrades rather than hardware upgrades.

Mitsubishi Q-series

Mitsubishi Q-series allows users to configure the best combination of CPU, communication devices, specialist control modules and discreet I/O on a back-plane.

With a choice of basic and advanced CPUs, specialist motion and process controllers, users can select their control philosophy, programming concept and programming language – all from a single platform.

Flexibility and scalability ensure that Q-series offers a single automation platform for individual machine or integrated plant wide management.

Alpha 2-series – Logic block



Technical specification

Basic instruction processing	..... 0.21µs
Memory	..... 5kB
I/O range	..... 10-24
Connectivity options	..... AS-interface
Maximum system extension	..... 1

Alpha 2 logic blocks bridge the gap between single components and a full PLC. It offers the advantages of a PLC system in a compact housing and a cost effective alternative to relays and contactors

The Alpha 2-series is suitable for applications in industrial machines and automated building services.

Key features include a 200 function block program capacity, an extra-large display, expansion options and two serial communication ports. The instruction set includes maths operation, PWM and SMS text messaging capabilities.

Features

- Clock & calendar functionality - set actions at designated times or dates
- Up to 8A relay switching capacity
- Two integrated serial interfaces
- 8 function keys and large LCD display
- Optional password protection
- Expandable with input and output extension modules
- Analogue input/output
- GSM function for communication with mobile phones
- Suitable for analogue and temperature control

Alpha programming software

- Windows® based function block programming software
- Drag and drop programming
- Easy to use, even without training
- Real time program monitor
- Program simulation – no controller required
- Process visualisation

Base units

Description	Order Code	List Price
24V d.c. powered relay output		
6 inputs (up to 6 analogue), 4 relay outputs	AL2-10MR-D	£100.00
8 inputs (up to 8 analogue), 6 relay outputs	AL2-14MR-D	£128.50
15 inputs (up to 8 analogue), 9 relay outputs	AL2-24MR-D	£179.50
100-240V a.c. powered relay output		
6 inputs, 4 relay outputs	AL2-10MR-A	£100.00
8 inputs, 6 relay outputs	AL2-14MR-A	£128.50
15 inputs, 9 relay outputs	AL2-24MR-A	£179.50

Plug-in expansion modules

Description	Order Code	List Price
4-channel digital input module (24V d.c.)	AL2-4EX	£45.00
4-channel digital input module (220-240V a.c.)	AL2-4EX-A2	£56.00
4-channel digital output module; relay	AL2-4EYR	£56.00
4-channel digital output module; transistor	AL2-4EYT	£56.00
2-channel analogue output module	AL2-2DA	£68.00
2-channel analogue Pt100 input module	AL2-2PT-ADP	£62.50
2-channel analogue thermocouple input module (K type)	AL2-2TC-ADP	£62.50

Programming software and cables

Description	Order Code	List Price
Alpha programming software Version 2.0	ALVLS-V2	£113.00
Programming cable for FX PLCs only - 3m	SC-09	£265.10
USB to 6 pin adapter with 3m cable	FX-USB-AW	£153.00
USB to serial converter	E6696	£47.45
Alpha programming cable – 2.5m*	AL232CAB	£45.00

* For AL2-14MR and AL2-24MR versions only

Accessories

Description	Order Code	List Price
AS-interface module*	AL2-ASI-BD	£54.00
EEPROM memory cassette (5Kb)	AL2-EEPROM-2	£29.00
USB to RS232C adapter	USB-RS232	£29.00
RS232C interface cable for PC or GSM modem*	AL2-GSM-CAB	£35.00
0.75A power supply for 24V base units	ALPHA-POWER-24-0.75	£47.00
1.75A power supply for 24V base units	ALPHA-POWER-24-1.75	£62.50
2.5A power supply for 24V base units	ALPHA-POWER-24-2.5	£67.00

* For AL2-14MR and AL2-24MR versions only

FX3S – Entry level, compact PLC



See page 312
For FX3U ADP modules
(FX3S-CNV-ADP adapter required)

Technical specification

Power supply	100-240V a.c.
Input	24V d.c.
Outputs	Relay or transistor
Ambient temperature	0 to 55°C
User memory	4000 steps EEPROM
Protection	IP10
Fuse rating	250V 1.0A

FX3S is the latest addition to the FX3 range. Base units are available in 10, 14, 20 & 30 inputs/outputs.

FX3S has a basic instruction processing speed which is 3 times faster than its predecessor, the FX1S. It also has enhanced capability for analogue I/O and a wider range of communication options.

High speed counters and pulse chain outputs are also included for simple positioning control.

Features

- High processing speed (0.21ms per log. instruction)
- 4000 step memory
- Integrated positioning controller
- Integrated real-time clock
- Programmed using GX Works2
- Built-in USB programming port
- Communication and analogue adapters are on pages 310 and 311
- FX3u ADP modules (page 312) can be used (requires a FX3S-CNV-ADP adapter)

Description	Order Code	List Price
100-240V a.c. powered, 24V d.c. inputs, relay outputs		
6 inputs, 4 relay outputs	FX3S-10MR-ES	£124.50
8 inputs, 6 relay outputs	FX3S-14MR-ES	£180.50
12 inputs, 8 relay outputs	FX3S-20MR-ES	£241.00
16 inputs, 14 relay outputs	FX3S-30MR-ES	£300.50
24V d.c. powered, 24V d.c. inputs, relay outputs		
6 inputs, 4 relay outputs	FX3S-10MR-DS	£111.00
8 inputs, 6 relay outputs	FX3S-14MR-DS	£167.50
12 inputs, 8 relay outputs	FX3S-20MR-DS	£229.00
16 inputs, 14 relay outputs	FX3S-30MR-DS	£288.50
100-240V a.c. powered, 24V d.c. inputs, transistor outputs		
6 inputs, 4 transistor outputs	FX3S-10MT-ESS	£124.50
8 inputs, 6 transistor outputs	FX3S-14MT-ESS	£180.50
12 inputs, 8 transistor outputs	FX3S-20MT-ESS	£241.00
16 inputs, 14 transistor outputs	FX3S-30MT-ESS	£300.50
24V d.c. powered, 24V d.c. inputs, transistor outputs		
6 inputs, 4 transistor outputs	FX3S-10MT-DSS	£111.00
8 inputs, 6 transistor outputs	FX3S-14MT-DSS	£167.50
12 inputs, 8 transistor outputs	FX3S-20MT-DSS	£229.00
16 inputs, 14 transistor outputs	FX3S-30MT-DSS	£288.50

ADP module adapter

Description	Order Code	List Price
Adapter for connecting FX3U ADP modules	FX3S-CNV-ADP	£24.50

Plug-in special function and communication boards

Description	Order Code	List Price
Analogue adapter, 2 analogue inputs, 12 bit	FX3G-2AD-BD	£143.50
Analogue adapter, 1 analogue output, 12 bit	FX3G-1DA-BD	£143.50
Analogue set point adapter for 8 set point values	FX3G-8AV-BD	£88.00
RS422 interface adapter	FX3G-422-BD	£116.00
RS485 interface module	FX3G-485-BD	£116.00
RS232C interface module	FX3G-232-BD	£116.00
RS485 board (non isolated, RJ45 connector)	FX3G-485-BD-RJ	£116.00
Input expansion board (4 inputs, sink/source)	FX3G-4EX-BD	£116.00
Output expansion board (2 transistor outputs, sink/source)	FX3G-2EYT-BD	£116.00

Software Selector Guide



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FX3G – Mid-range, compact PLC



The Mitsubishi FX3G is an introductory compact PLC designed for simple, yet performance-critical applications.

Features

- Dual bus architecture
- Control of up to 128 directly connected I/O, or up to 256 I/O with CC-Link remote I/Os
- Large 32k step memory
- Integrated USB and serial interface for PC, PLC and HMI communication
- Input and output status indication
- Detachable terminal blocks
- Integrated real-time clock
- Exchangeable interface and extension adapters for direct mounting
- Expandable with digital I/O, special function and ADP modules

See page 312
For FX3U ADP modules
(FX3G-CNV-ADP adapter required)

Technical specification

Basic instruction processing	... 0.21µs
Memory	... 32k steps
I/O range	
Direct	... 10-128
CC-link remote I/O	... Up to 256
High speed counter input	... Up to 60kHz
Connectivity options	... CC-link, Modbus, Ethernet
Maximum system extension	
Special function blocks (right)	... 8
ADP modules (left)	... 4

Description	Order Code	List Price
100-240V a.c. powered, 24V d.c. inputs, relay outputs		
8 inputs, 6 relay outputs	FX3G-14MR-ES	£307.50
14 inputs, 10 relay outputs	FX3G-24MR-ES	£389.50
24 inputs, 16 relay outputs	FX3G-40MR-ES	£565.00
36 inputs, 24 relay outputs	FX3G-60MR-ES	£697.00
24V d.c. powered, 24V d.c. inputs, relay outputs		
8 inputs, 6 relay outputs	FX3G-14MR-DS	£307.50
14 inputs, 10 relay outputs	FX3G-24MR-DS	£389.50
24 inputs, 16 relay outputs	FX3G-40MR-DS	£565.00
36 inputs, 24 relay outputs	FX3G-60MR-DS	£697.00
100-240V a.c. powered, 24V d.c. inputs, transistor outputs		
8 inputs, 6 transistor outputs	FX3G-14MT-ESS	£307.50
14 inputs, 10 transistor outputs	FX3G-24MT-ESS	£391.00
24 inputs, 16 transistor outputs	FX3G-40MT-ESS	£563.00
36 inputs, 24 transistor outputs	FX3G-60MT-ESS	£697.00
24V d.c. powered, 24V d.c. inputs, transistor outputs		
8 inputs, 6 transistor outputs	FX3G-14MT-DSS	£307.50
14 inputs, 10 transistor outputs	FX3G-24MT-DSS	£391.00
24 inputs, 16 transistor outputs	FX3G-40MT-DSS	£563.00
36 inputs, 24 transistor outputs	FX3G-60MT-DSS	£697.00

ADP module adapter

Description	Order Code	List Price
Adapter for connecting FX3U ADP modules	FX3G-CNV-ADP	£24.50

Plug-in special function and communication boards

Description	Order Code	List Price
Analogue adapter, 2 analogue inputs, 12 bit	FX3G-2AD-BD	£143.50
Analogue adapter, 1 analogue output, 12 bit	FX3G-1DA-BD	£143.50
Analogue set point adapter for 8 set point values	FX3G-8AV-BD	£88.00
RS422 interface adapter	FX3G-422-BD	£116.00
RS485 interface module	FX3G-485-BD	£116.00
RS232C interface module	FX3G-232-BD	£116.00
RS485 board (non isolated, RJ45 connector)	FX3G-485-BD-RJ	£116.00
Input expansion board (4 inputs, sink/source)	FX3G-4EX-BD	£116.00
Output expansion board (2 transistor outputs, sink/source)	FX3G-2EYT-BD	£116.00

Software Selector Guide



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FX3GE – Mid-range PLC with built-in analogue I/O and Ethernet connectivity



The Mitsubishi FX3GE provides the same performance and features of the FX3G with built-in analogue I/O and Ethernet connectivity.

Features

- Dual bus architecture
- Control of up to 128 directly connected I/O, or up to 256 I/O with CC-Link remote I/Os
- Large 32k step memory
- Integrated USB and serial interface for PC, PLC and HMI communication
- Input and output status indication
- Detachable terminal blocks
- Integrated real-time clock
- Exchangeable interface and extension adapters for direct mounting
- Expandable with digital I/O, special function and ADP modules
- Built-in analogue I/O (2 in, 1 out)
- Built-in Ethernet connectivity

Technical specification

Basic instruction processing	..... 0.2 | μ S
Memory	..... 32k steps
I/O range	
Direct	..... 10-128
CC-link remote I/O	..... Up to 256
High speed counter input	..... Up to 60kHz
Connectivity options	..... CC-link, Modbus, Ethernet
Maximum system extension	
Special function blocks (right)	..... 8
ADP modules (left)	..... 4

See page 312
For FX3U ADP modules
(FX3G-CNV-ADP adapter required)

Description	Order Code	List Price
100-240V a.c. powered, 24V d.c. inputs, relay outputs		
14 inputs, 10 relay outputs	FX3GE-24MR-ES	£461.50
24 inputs, 16 relay outputs	FX3GE-40MR-ES	£719.00
24V d.c. powered, 24V d.c. inputs, relay outputs		
14 inputs, 10 relay outputs	FX3GE-24MR-DS	£461.50
24 inputs, 16 relay outputs	FX3GE-40MR-DS	£719.00
100-240V a.c. powered, 24V d.c. inputs, transistor outputs		
14 inputs, 10 transistor outputs	FX3GE-24MT-ESS	£461.50
24 inputs, 16 transistor outputs	FX3GE-40MT-ESS	£719.00
24V d.c. powered, 24V d.c. inputs, transistor outputs		
14 inputs, 10 transistor outputs	FX3GE-24MT-DSS	£461.50
24 inputs, 16 transistor outputs	FX3GE-40MT-DSS	£719.00

ADP module adapters

Description	Order Code	List Price
Adapter for connecting FX3U ADP modules	FX3G-CNV-ADP	£24.50

Plug-in special function and communication boards

Description	Order Code	List Price
Analogue adapter, 2 analogue inputs, 12 bit	FX3G-2AD-BD	£143.50
Analogue adapter, 1 analogue output, 12 bit	FX3G-1DA-BD	£143.50
Analogue set point adapter for 8 set point values	FX3G-8AV-BD	£88.00
RS422 interface adapter	FX3G-422-BD	£116.00
RS485 interface module	FX3G-485-BD	£116.00
RS232C interface module	FX3G-232-BD	£116.00
RS485 board (non isolated, RJ45 connector)	FX3G-485-BD-RJ	£116.00
Input expansion board (4 inputs, sink/source)	FX3G-4EX-BD	£116.00
Output expansion board (2 transistor outputs, sink/source)	FX3G-2EYT-BD	£116.00

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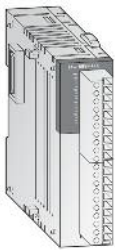
FX3GC – Mid-range, connector type PLC



The Mitsubishi FX3GC provides the same performance and features of the FX3G, in a connector type PLC (reducing wiring time and potential wiring faults).

All the features of the FX3G PLC (on page 304) plus:

- Reduced size and wiring using connector type I/O
- Connect FX2N/FX3U special function blocks (on page 310) using a special function adapter (FX2NC-CNV-IF)
- Connect FX3U ADP modules (page 312) without an adapter



Output module



Input module

Description	Order Code	List Price
24V d.c. powered, 24V d.c. inputs, transistor outputs (sink type)		
Base unit 16 inputs, 16 transistor outputs	FX3GC-32MT-D	£266.50
24V d.c. powered, 24V d.c. inputs, transistor outputs (sink/source type)		
Base unit 16 inputs, 16 transistor outputs	FX3GC-32MT-DSS	£266.50
Input modules		
16 inputs; screw terminal	FX2NC-16EX-T-DS	£117.00
16 inputs; IDC connector	FX2NC-16EX-DS	£99.00
32 inputs; IDC connector	FX2NC-32EX-DS	£175.50
Output modules		
16 relay outputs; screw terminal	FX2NC-16EYR-T-DS	£153.00
16 transistor outputs; IDC connector	FX2NC-16EY-DS	£128.50
32 transistor outputs; IDC connector	FX2NC-32EY-DS	£215.50
Analogue and PID modules		
Terminal A/D 4 channel, 16 bit, -10V to +10V, 0-20mA d.c.	FX3U-4AD	£249.50
Terminal D/A 4 channel, 16 bit, -10V to +10V, 0-20mA d.c.	FX3U-4DA	£406.00
Output block connectors and wiring solutions		
8-way terminal output block connector; screw connection	TB-8EY-S	£59.00
8-way terminal output block connector; spring connection	TB-8EY-C	£59.00
20-way terminal output block	TB-20-S	£26.50
Set of 8 relays for TB-8EY	TB-8-RELAY-6A	£30.00
Set of 8 transistors for TB-8EY	TB-8-TRANSISTOR-2A	£94.00
Isolated bridge strip for TB-8EY - red, 50cm	TB-PIB-RD	£9.00
Isolation plate for TB-8EY	TB-SP	£3.00
1m cable for 2 x TB-8EY blocks	TB-EY-CAB-1M	£22.50
3m cable for 2 x TB-8EY blocks	TB-EY-CAB-3M	£25.50
5m cable for 2 x TB-8EY blocks	TB-EY-CAB-5M	£31.00
Input block connectors and wiring solutions		
8-way terminal input block connector; screw connection	TB-8EX-S	£31.00
8-way terminal input block connector; spring connection	TB-8EX-C	£34.00
16-way terminal input block connector; screw connection	TB-16EX-S	£42.00
16-way terminal input block connector; spring connection	TB-16EX-C	£45.50
1m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-1M	£18.00
3m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-3M	£22.50
5m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-5M	£25.50
Adapter for connecting FX2N/FX3U special function blocks	FX2NC-CNV-IF	£31.00

See page 312 for FX3U ADP modules
(No adapter required)

See page 310
For FX2N and FX3U
special function blocks
(FX2NC-CNV-IF special function
adapter required)

FX3U – High-end compact PLC



The FX3U is a dual system-bus, high speed, fully expandable compact PLC, designed to seamlessly control communication, networking, analogue and positioning systems.

With a maximum of 384 controllable local and networked I/O via CC-Link, the FX3U uses its power and flexibility to provide a solution for a variety of applications.

Features

- High efficiency with more speed, more performance, more memory, and new functions
- Built-in high speed processing and positioning
- Control a maximum of 256 connected I/O, and up to 384 points with CC-Link remote I/Os
- Integrated serial interface for communication between PCs and HMI
- Integrated positioning control
- LEDs for indicating the input and output status
- Slot for memory cassettes
- Integrated real-time clock

Technical specification

Ambient temperature 0 to 55°C
 Protection IPI0
 I/O 16, 32, 48, 64, 80 or 128 input/
 output points expandable to 384 points
 Memory 64K steps
 Integrated high-speed
 counter inputs Up to 100kHz

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Description	Order Code	List Price
24V d.c. powered, 24V d.c. inputs, relay outputs		
8 inputs, 8 relay outputs	FX3U-16MR-DS	£462.50
16 inputs, 16 relay outputs	FX3U-32MR-DS	£628.00
24 inputs, 24 relay outputs	FX3U-48MR-DS	£788.00
32 inputs, 32 relay outputs	FX3U-64MR-DS	£895.00
40 inputs, 40 relay outputs	FX3U-80MR-DS	£984.00

24V d.c. powered, 24V d.c. inputs, transistor outputs		
8 inputs, 8 transistor outputs	FX3U-16MT-DSS	£462.50
16 inputs, 16 transistor outputs	FX3U-32MT-DSS	£628.00
24 inputs, 24 transistor outputs	FX3U-48MT-DSS	£788.00
32 inputs, 32 transistor outputs	FX3U-64MT-DSS	£895.00
40 inputs, 40 transistor outputs	FX3U-80MT-DSS	£984.00

100-240V a.c. powered, 24V d.c. inputs, relay outputs		
8 inputs, 8 relay outputs	FX3U-16MR-ES	£462.50
16 inputs, 16 relay outputs	FX3U-32MR-ES	£628.00
24 inputs, 24 relay outputs	FX3U-48MR-ES	£788.00
32 inputs, 32 relay outputs	FX3U-64MR-ES	£895.00
40 inputs, 40 relay outputs	FX3U-80MR-ES	£984.00
64 inputs, 64 relay outputs	FX3U-128MR-ES	£1,343.00

100-240V a.c. powered, 24V d.c. inputs, transistor outputs		
8 inputs, 8 transistor outputs	FX3U-16MT-ESS	£462.50
16 inputs, 16 transistor outputs	FX3U-32MT-ESS	£628.00
24 inputs, 24 transistor outputs	FX3U-48MT-ESS	£788.00
32 inputs, 32 transistor outputs	FX3U-64MT-ESS	£895.00
40 inputs, 40 transistor outputs	FX3U-80MT-ESS	£984.00
64 inputs, 64 transistor outputs	FX3U-128MT-ESS	£1,343.00

100-240V a.c. powered, 24V d.c. inputs, triac outputs		
16 inputs, 16 triac outputs	FX3U-32MS-ES	£439.00
32 inputs, 32 triac outputs	FX3U-64MS-ES	£733.00

100-240V a.c. powered, 110V a.c. inputs, relay outputs		
16 inputs, 16 relay outputs	FX3U-32MR-UA1	£641.00
32 inputs, 32 relay outputs	FX3U-64MR-UA1	£1,065.00

ADP module adapter

Description	Order Code	List Price
Adapter for connecting FX3U ADP modules	FX3U-CNV-BD	£24.50

Plug-in special function and communication boards

Description	Order Code	List Price
RS232 interface adapter	FX3U-232-BD	£116.00
RS422 interface adapter	FX3U-422-BD	£116.00
RS485 interface adapter	FX3U-485-BD	£116.00
USB interface adapter (inc. cable and driver)	FX3U-USB-BD	£116.00
Analogue set point adapter for 8 set points	FX3U-8AV-BD	£116.00

See page 312 for FX3U ADP modules
 (No adapter required)

FX3UC – High-end, connector type PLC



The FX3UC is an ultra compact high speed, fully expandable PLC. Using 24V d.c. power and connector type transistor I/O, the FX3UC is designed for space conscious, modular applications.

Created in line with the FX3U series, the FX3UC incorporates built-in high speed I/O and dual system bus architecture, optimising communication, networking, analogue and positioning control.

Features

- Up to 256 I/O (up to 384 points with CC-Link remote I/O).
- Reduced size and wiring using connector type I/O
- Built-in high speed processing and positioning
- Connect FX2N/FX3U special function blocks (on page 310) using a special function adapter (FX2NC-CNV-IF)
- Connect FX3U ADP modules (page 312) without an adapter

See page 310
**For FX2N and FX3U
 special function blocks**
*(FX2NC-CNV-IF special function
 adapter required)*

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Description	Order Code	List Price
Base unit 24V d.c.		
8 inputs, 8 transistor outputs	FX3UC-16MT-DSS	£227.00
8 inputs (sink); 8 relay outputs	FX3UC-16MRD-T	£282.00
8 inputs (sink/source); 8 relay outputs	FX3UC-16MR-DS-T	£282.00
16 inputs, 16 transistor outputs	FX3UC-32MT-DSS	£296.50
32 inputs, 32 transistor outputs	FX3UC-64MT-DSS	£493.50
48 inputs, 48 transistor outputs	FX3UC-96MT-DSS	£728.00

Input modules		
16 inputs; screw terminal	FX2NC-16EXT-DS	£117.00
16 inputs; IDC connector	FX2NC-16EX-DS	£99.00
32 inputs; IDC connector	FX2NC-32EX-DS	£175.50

Output modules		
16 relay outputs; screw terminal	FX2NC-16EYR-T-DS	£153.00
16 transistor outputs; IDC connector	FX2NC-16EYT-DSS	£128.50
32 transistor outputs; IDC connector	FX2NC-32EYT-DSS	£215.50

Analogue and PID modules		
Terminal A/D 4 channel, 16 bit, -10V to +10V, 0-20mA d.c.	FX3U-4AD	£249.50
Terminal D/A 4 channel, 16 bit, -10V to +10V, 0-20mA d.c.	FX3U-4DA	£406.00

Output blocks and wiring solutions		
8-way terminal output block connector; screw connection	TB-8EY-S	£59.00
8-way terminal output block connector; spring connection	TB-8EY-C	£59.00
20-way terminal output block	TB-20-S	£26.50
Set of 8 relays for TB-8EY	TB-8-RELAY-6A	£30.00
Set of 8 transistors for TB-8EY	TB-8-TRANSISTOR-2A	£94.00
Isolated bridge strip for TB-8EY - red, 50cm	TB-PIB-RD	£9.00
Isolated bridge strip for TB-8EY - blue, 50cm	TB-PIB-BL	£9.00
Isolation plate for TB-8EY	TB-SP	£3.00
1m cable for 2 x TB-8EY blocks	TB-EY-CAB-1M	£22.50
3m cable for 2 x TB-8EY blocks	TB-EY-CAB-3M	£25.50
5m cable for 2 x TB-8EY blocks	TB-EY-CAB-5M	£31.00

Input blocks and wiring solutions		
8-way terminal input block connector; screw connection	TB-8EX-S	£31.00
8-way terminal input block connector; spring connection	TB-8EX-C	£34.00
16-way terminal input block connector; screw connection	TB-16EX-S	£42.00
16-way terminal input block connector; spring connection	TB-16EX-C	£45.50
1m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-1M	£18.00
3m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-3M	£22.50
5m cable for TB-8EX/16EX/20-S blocks	TB-EX-CAB-5M	£25.50
Adapter for connecting FX2N/FX3U special function blocks	FX2NC-CNV-IF	£31.00

See page 312 for **FX3U ADP modules**
(No adapter required)

FX5U – Premium compact PLC



Features

- High speed system bus communication (approx. 150 x faster than the FX3U)
- High speed inputs and outputs
- Built-in analogue inputs and outputs
- Built-in SD card slot
- Built-in Ethernet included as standard
- Built-in RS-485 port (with Modbus function)
- Built-in positioning (200Kpps, 4-axis built-in)
- Advanced motion control using the FX-40SSC-S motion module
- Control a maximum of 256 connected I/O and up to 512 points with CC-Link remote I/O

The FX5U gives the FX a performance boost and adds features that set benchmark standards for compact PLCs.

It enables users to develop more complex and sophisticated automation systems, as well as higher performance applications, without having to migrate to a larger and more costly PLC family.

Technical specification

Power supply . . . 100-240V a.c., 50/60Hz
 Ambient temperature 0 to 55°C
 I/O 32, 64 or 80 input/output points
 expandable to 512 points
 Memory 64K steps
 Input 24V d.c., PNP source
 Output type Relay, Transistor
 High speed counter 8 channel,
 up to 200kHz
 Pulse output 200kHz 4-axis open
 collector (transistor type only)
 Memory card interface SD card
 Communication port Ethernet port,
 RS485 1 channel
 Analogue input 2 channel (12 bit)
 Analogue output 1 channel (12 bit)
 Real time clock . . . Retained up to 10 days
 with capacitor
 Expansion board slots 1 slot
 Expansion adaptors Up to
 2 communication adaptors
 plus up to 4 analogue adaptors

Software Selector Guide

See page 313

www.lcautomation.com

Description	Order Code	List Price
24V d.c. powered, 24V d.c. inputs, relay outputs		
16 inputs, 16 relay outputs	FX5U-32MR/DS	£628.00
32 inputs, 32 relay outputs	FX5U-64MR/DS	£895.00
40 inputs, 40 relay outputs	FX5U-80MR/DS	£984.00
24V d.c. powered, 24V d.c. inputs, transistor outputs		
16 inputs, 16 transistor outputs	FX5U-32MT/DSS	£628.00
32 inputs, 32 transistor outputs	FX5U-64MT/DSS	£895.00
40 inputs, 40 transistor outputs	FX5U-80MT/DSS	£984.00
100-240V a.c. powered, 24V d.c. inputs, relay outputs		
16 inputs, 16 relay outputs	FX5U-32MR/ES	£628.00
32 inputs, 32 relay outputs	FX5U-64MR/ES	£895.00
40 inputs, 40 relay outputs	FX5U-80MR/ES	£984.00
100-240V a.c. powered, 24V d.c. inputs, transistor outputs		
16 inputs, 16 transistor outputs	FX5U-32MT/ESS	£628.00
32 inputs, 32 transistor outputs	FX5U-64MT/ESS	£895.00
40 inputs, 40 transistor outputs	FX5U-80MT/ESS	£984.00
Unpowered digital modular extension blocks		
8-channel input block (24V d.c.)	FX5-8EX-ES	£97.00
8-channel output block; relay	FX5-8EYR-ES	£116.00
8-channel output block; transistor	FX5-8EYT-ESS	£116.00
16-channel input block (24V d.c.)	FX5-16EX-ES	£162.00
16-channel output block; relay	FX5-16EYR-ES	£193.00
16-channel output block; transistor	FX5-16EYT-ESS	£193.00
32-channel output block; relay	FX5-32ER-ES	£297.00
32-channel output block; transistor	FX5-32ET-ESS	£297.00
Plug-in special function and communication boards		
RS232 interface adapter	FX5-232-BD	£116.00
RS485 interface adapter	FX5-485-BD	£116.00
RS422 interface adapter for easy GOT connection	FX5-422-BD-GOT	£116.00
ADP expansion modules		
RS232C interface module with Modbus protocol	FX5-232-ADP	£111.00
RS485 interface module with Modbus protocol	FX5-485-ADP	£111.00
Special function blocks and accessories		
4-axis SSCNETIII/H simple motion module	FX5-40SSC-S	£550.00
Bus extension power supply module	FX5-1PSU-SV	£122.00
Bus conversion module for use with FX3 modules	FX5-CNV-BUS	£32.00

FX-series – Extension and function blocks



An FX PLC system consists of a base unit, with added functionality and I/O range using extension I/O and special function blocks.

Extension blocks

Extension blocks are installed directly to the right hand side of the FX3G or FX3U CPU. Adapter blocks can also provide RS232, RS422, RS485 or USB interfaces.

Extension I/O blocks

Extension I/O blocks can be powered (using an additional external power supply) or unpowered (powered by the main PLC).

Please note: A PLC can only provide up to 5V d.c. and limits the number of unpowered extension blocks the CPU can support. After this limit, additional blocks must be powered.

Special function blocks

A range of special function blocks are available for FX PLCs, providing networking, analogue control, pulse train outputs, data logging function and temperature inputs.

Unpowered modular extension blocks

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
8-channel input block	—	●	●	◆	●	◆	—	FX2N-8EX-ES/UL FX5-8EX-ES	£97.00 £97.00
8-channel output block; relay	—	●	●	◆	●	◆	—	FX2N-8EYR-ES/UL FX5-8EYR-ES	£116.00 £116.00
8-channel output block; transistor	—	●	●	◆○	●	◆	—	FX2N-8EYT-ESS/UL FX5-8EYT-ESS	£116.00 £116.00
16-channel input block	—	●	●	◆	●	◆	—	FX2N-16EX-ES/UL FX5-16EX-ES	£162.00 £162.00
16-channel output block; relay	—	●	●	◆	●	◆	—	FX2N-16EYR-ES/UL FX5-16EYR-ES	£193.00 £193.00
16-channel output block; transistor	—	●	●	◆○	●	◆	—	FX2N-16EYT-ESS/UL FX5-16EYT-ESS	£193.00 £193.00
32-channel output block; relay	—	—	—	—	—	—	●	FX5-32ER-ES	£297.00
32-channel output block; transistor (high speed)	—	—	—	—	—	—	●	FX5-16ET/ESS-H	£240.00

Powered compact extension units

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
16-channel input/16-channel output unit; relay	—	●	●	—	●	◆	—	FX2N-32ER-ES/UL	£297.50
24-channel input/24-channel output unit; relay	—	●	●	—	●	◆	—	FX2N-48ER-ES/UL	£425.50

Special function modules

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
I/O modules and adapters									
1-channel analogue output board	●	●	●	—	—	—	—	FX3G-1DA-BD	£143.50
2-channel analogue output module	—	●	●	◆	●	◆	—	FX2N-2DA	£287.65
2-channel analogue input board	●	●	●	—	—	—	—	FX3G-2AD-BD	£143.50
2-channel analogue input module	—	●	●	◆	●	◆	—	FX2N-2AD	£182.05
4-channel analogue input/1-channel analogue output module	—	●	●	◆	●	◆	—	FX2N-5A	£374.55
4-channel analogue input module	—	●	●	◆	●	◆	■	FX3U-4AD	£249.50
4-channel analogue output module	—	●	●	◆	●	◆	■	FX3U-4DA	£406.00
8-channel analogue input module	—	●	●	◆	●	◆	—	FX2N-8AD	£455.95
Positioning modules									
Single-axis positioning module; 100kpps output frequency	—	—	—	—	●	◆	—	FX2N-1PG-E	£296.50
Single-axis positioning module; 1Mpps output frequency	—	—	—	—	●	◆	—	FX2N-10PG	£324.00
2-axis SSCNET III position control module*	—	—	—	—	●	◆	—	FX3U-20SSC-H	£579.00
4-axis SSCNET III/H simple motion module	—	—	—	—	—	—	●	FX5-40SSC-S	£550.00
8-axis SSCNET III/H simple motion module	—	—	—	—	—	—	●	FX5-80SSC-S	£725.00

* Please note: You will need FX-Configurator-FP to programme this unit.

Key ◆ Requires a FX2NC-CNV-IF adapter

● On the Source version only

■ Requires a FX5-CNV-BUS adapter

Can't find what you're looking for? ... give us a call

FX-series – Extension and function blocks



Network connection modules and cables

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
CC-Link interface; master module	—	●	●	◆	●	◆	—	FX3U-16CCL-M	£279.00
CC-Link interface; slave module	—	●	●	◆	●	◆	■	FX3U-64CCL	£280.00
Profibus DP module; master module	—	—	—	—	●	◆	—	FX3U-64DP-M	£462.50
Profibus DP interface; slave module	—	●	●	◆	●	◆	—	FX3U-32DP	£290.50
CANopen interface module	—	●	●	◆	●	◆	—	FX3U-CAN	£324.00
Ethernet TCP/IP interface; 10/100BaseT	—	●	●	◆	●	◆	—	FX3U-ENET	£387.50
J1939 communication interface module	—	●	—	◆	●	◆	—	FX3U-J1939	£324.00
RS232 interface board	—	—	—	—	●	—	—	FX3U-232-BD	£116.00
	—	—	—	—	—	—	●	FX5-232-BD	£116.00
RS232C interface board	●	●	●	—	—	—	—	FX3G-232-BD	£116.00
RS422 interface board	—	—	—	—	●	—	—	FX3U-422-BD	£116.00
	●	●	●	—	—	—	—	FX3G-422-BD	£116.00
	—	—	—	—	—	—	●	FX5-422-BD-GOT	£116.00
RS485 interface board	—	—	—	—	●	—	—	FX3U-485-BD	£116.00
	●	●	●	—	—	—	—	FX3G-485-BD	£116.00
	—	—	—	—	—	●	—	FX5-485-BD	£116.00
RS485 interface board (non isolated, RJ45 connector)	●	●	●	—	—	—	—	FX3G-485-BD-RJ	£116.00
Input expansion board (4 inputs, sink/source)	●	●	●	—	—	—	—	FX3G-4EX-BD	£116.00
Output expansion board (2 transistor outputs, sink/source)	●	●	●	—	—	—	—	FX3G-2EYT-BD	£116.00
USB interface adapter; with 3m cable and driver CD	—	—	—	—	●	—	—	FX3U-USB-BD	£116.00
CC-Link interface; master	—	●	—	◆	●	◆	■	FX3U-16CCL-M	£279.00

Special function blocks and accessories

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
Dedicated 2 loop PID control block with auto-tuning	—	●	●	◆	●	◆	—	FX2N-2LC	£326.15
Dedicated 4 loop PID control block with auto-tuning	—	●	●	◆	●	◆	■	FX3U-4LC	£406.00
1-channel high speed counter module	—	—	—	—	●	◆	—	FX2N-1HC	£326.15
2-channel high speed counter module	—	—	—	—	●	◆	■	FX3U-2HC	£406.00
Analogue set point board for 8 set point values	●	●	●	—	—	—	—	FX3G-8AV-BD	£88.00
Analogue set point board for 8 set point values	—	—	—	—	●	—	—	FX3U-8AV-BD	£116.00
ADP connector (required if no BD module is used)	—	—	—	—	—	—	—	FX3U-CNV-BD	£24.50
Adapter for use with ADP modules	—	●	●	—	—	—	—	FX3G-CNV-ADP	£24.50
PLC mounted display module	—	●	●	—	—	—	—	FX3G-5DM	£66.00
PLC mounted display module	—	—	—	—	●	—	—	FX3U-7DM	£106.00
EEPROM memory cassette; 32k steps	●	●	●	—	—	—	—	FX3G-EEPROM-32L	£108.00
Flash-RAM memory cassette; 16k steps	—	—	—	—	●	—	—	FX3U-FLROM-16	£111.00
Flash-RAM memory cassette; 64k steps	—	—	—	—	●	—	—	FX3U-FLROM-64	£128.50
Flash-RAM memory cassette; 64k steps with copy function	—	—	—	—	●	—	—	FX3U-FLROM-64L	£170.50
Battery	—	—	—	—	●	—	●	FX3U-32BL	£47.50
Programming cable; 3m	●	●	●	●	●	●	—	SC-09	£265.10
Programming cable with USB connector; 3m	●	●	●	●	●	●	—	FX-USB-AW	£153.00
Extension cable; 650mm (for powered extension units)	—	●	—	◆	●	◆	—	FX0N-65EC	£40.50
Extension cable adapter (for unpowered extension modules)	—	●	—	◆	●	◆	—	FX2N-CNV-BC	£32.00
Bus extension power supply module	—	—	—	—	—	—	●	FX5-1PSU-5V	£122.00
Bus conversion module (for FX3 modules with FX5U)	—	—	—	—	—	—	●	FX5-CNV-BUS	£32.00

Key ◆ Requires a FX2NC-CNV-IF adapter

■ Requires a FX5-CNV-BUS adapter

Need technical support? ... give us a call

ADP modules and function blocks



ADP adapter modules fit to the left side of the CPU. Please note some CPUs will require a specific adapter (listed with the individual PLC)

Features

- LEDs indicate input and output status
- FX3G and FX3U series compatible
- Very compact dimensions
- Vertical terminal blocks with a cable guide to the upper or lower side

Description	Suitable for use with							Order Code	List Price
	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC	FX5U		
I/O modules and adapters									
2-channel input/1-channel output analogue module	◆	◆	—	●	◆	●	—	FX3U-3A-ADP	£220.50
4-channel analogue input module	◆	◆	—	●	◆	●	—	FX3U-4AD-ADP	£232.00
4-channel analogue output module	◆	◆	—	●	◆	●	—	FX3U-4DA-ADP	£360.00
Analogue temperature input adapters									
4-channel analogue temperature input module; J or K type	◆	◆	—	●	◆	●	—	FX3U-4AD-TC-ADP	£285.00
4-channel analogue temperature input module; Pt1000/Ni1000	◆	◆	—	●	◆	●	—	FX3U-4AD-PNK-ADP	£285.00
4-channel analogue temperature input module; Pt100	◆	◆	—	●	◆	●	—	FX3U-4AD-PT-ADP	£285.00
4-channel analogue temperature input module; Pt100, 3-wire	◆	◆	—	●	◆	●	—	FX3U-4AD-PTW-ADP	£285.00
High speed counter and pulse train modules									
4-channel input high-speed counter module (4x 100/200 kHz)	—	—	—	—	◆	—	—	FX3U-4HSX-ADP	£377.50
Two-axis positioning module (200 kHz)	—	—	—	—	◆	—	—	FX3U-2HSY-ADP	£493.50
Active data modules and communications adapter									
RS232C interface module (supports Modbus RTU & ASCII)	◆	◆	—	●	◆	●	—	FX3U-232ADP-MB	£111.00
	—	—	—	—	—	—	●	FX5-232-ADP	£111.00
RS485 interface module (supports Modbus RTU & ASCII)	◆	◆	—	●	◆	●	—	FX3U-485ADP-MB	£111.00
	—	—	—	—	—	—	●	FX5-485-ADP	£111.00
Ethernet ADP module	◆	◆	—	●	◆	●	—	FX3U-ENET-ADP	£136.50

Key

- ◆ An adapter is required to connect these ADP modules (listed with individual FX3 CPUs)
- These ADP modules can be connected without an adapter
- These modules require a FX3G CPU with firmware 1.20 or later, or a FX3UC CPU with firmware 2.61 or later

Mitsubishi power supplies



The performance and reliability of the power supply is critical for the operation of your control systems.

The Mitsubishi PSU series ensure optimum system performance with long mains failure bridging time and a MTBF of more than 500,000 hours.

5V + 24V d.c. outputs power supply for FX3U and FX5U

Description	Order Code	List Price
1A power supply	FX3U-1PSU-5V	£122.00

24V d.c. power supplies

Description	Order Code	List Price
2.5A power supply; 1-phase (85 - 264V a.c.)	PSU-25	£50.00
5A power supply; 1-phase (85 - 264V a.c.)	PSU-50	£74.00
10A power supply; 1-phase (85 - 264V a.c.)	PSU-100	£109.00
20A power supply; 1-phase (85 - 264V a.c.)	PSU-200	£160.00
20A power supply; 3-phase (3 x 320 - 575V a.c.)	PSU-200-3	£170.00
40A power supply; 3-phase (3 x 320 - 575V a.c.)	PSU-400-3	£244.00

Features include

- International approvals
- LED signalling
- High voltage resistance
- Power reserve (power boost)
- Nominal values. Even with high ambient temperature of up to 55°C

Programming software selector guide



Hardware Type	iQ Works2 Project Management Software Page 313	GX Works3 PLC Programming Software Page 314	Alpha2 PLC Programming Software Page 302	GT Works3 GOT HMI Designer Software Page 213	FR Configurator Inverter Setup Software Page 21	MT Works2 Q-motion Programming Software Page 316	RT Toolbox2 Robot Programming Software Call sales
Project Navigator	●	—	—	—	—	—	—
Alpha 2 PLCs	—	—	●	—	—	—	—
FX3-series PLCs	●	●	—	—	—	—	—
FX5U PLCs	●	●	—	—	—	—	—
A Series PLCs	●	●	—	—	—	—	—
L Series PLCs	●	●	—	—	—	—	—
Q Series	●	●	—	—	—	—	—
GOT HMIs	●	—	—	●	—	—	—
FR D, E, A and F Inverters	●	—	—	—	●	—	—
Melfa Robots	●	—	—	—	—	—	●
Q and L Series Motion Controllers	●	—	—	—	—	●	—

iQ Works2 – project management software



iQ Works2 is an integrated software suite with Navigator as the central system configuration with an easy-to-use, graphical user interface and additional project sharing features such as system labels and parameters.

The advantages of this powerful integrated software suite are that system design is made much easier with a substantial reduction in repetitious tasks, cutting down on errors while helping to reduce the total cost of ownership.

Features

- Integrated software package for project management
- Connects all project elements together in one package
- Reduces project development time
- Integrates PLC, HMI, motion control, robot and inverter programming software
- Collates and organises project software elements

Software includes:

- Navigator
System management software
- GX Works3 (including GX Works2)
PLC programming software
- GT Works2
GOT HMI designer software
- MT Works2
Motion controller engineering software
- RT Toolbox2 mini
Robot engineering software
- FR Configurator2
Inverter setup software

Description	Order Code	List Price
2 licence	iQ-Works2-V01-2LOC-E	£1,573.00

GX Works3 – PLC programming software



The functionality of GXWorks3 has been inherited from GX Developer and GX IEC Developer, with additional improvements to help increase productivity and drive down engineering time and costs.

Please note: GX Works3 also includes GX Works2 and GX Developer to provide legacy support for previous versions.

Features

- Includes GX Works2
- Navigation via tabs and docking windows
- Read/write system labels
- Auto-guessing for variables
- Intelligent function utilities integrated
- Insert ST block in ladder program
- Revision history
- Save and reuse transfer setups
- Simulation integrated
- Improved diagnostic functions
- FB's for simple and structured programming

Software includes:

- GX Works3
PLC programming software
- GX Works2
PLC programming software
- GX Developer
PLC programming software

Description	Order Code	List Price
2 licence	GX-Works3-V01-2L0C-E	£1,280.00
5 licence	GX-Works3-V01-5L0C-E	£2,980.00

For help selecting the correct software for your requirements see the **Programming Software Selector Guide on page 313**

Struggling to find what you need?

We can help with that ...

Blackburn
01254 685900

Chippenham
01249 460099



L-series compact modular PLCs



The L-series is a powerful, but compact modular controller with many features built-in to the CPU itself. Excellent value, performance and usability make it ideal for mid-size control applications.

- **Reliable, easy to use and flexible**

The modular L-series has been designed with high reliability, user friendliness and flexibility in mind

- **High system flexibility**

The rack-free design promotes high system flexibility with minimum form factor

- **Positioning control**

The built-in positioning function has a start time of just 30µs and high speed output of up to 200k pulses per second

- **Data logging**

The built-in data logging function provides an easy way to collect information for troubleshooting and performance evaluation

- **USB and Ethernet as standard**

The built-in USB 2.0 port or Ethernet interface can be used to connect directly at the installation site

- **SD memory card**

Quickly and easily backup the CPU programs and parameters

- **CC-Link network connectivity**

The high performance L26CPU-PBT CPU has a built-in CC-link master/slave interface which is compatible with the latest generation of CC-Link devices and support connections

- **Advanced programming software**

Compatible with GX Works2, the next generation of PLC maintenance and programming software

Description	Order Code	List Price
CPU modules		
L-series CPU - 20k step memory*	L02CPU-P	£870.00
L-series CPU - 60k step memory*	L06CPU-P	£1,550.00
L-series CPU - 256k step memory*	L26CPU-P	£2,890.00
L-series CPU - 256k step memory & CC-Link built-in*	L26CPU-PBT	£3,075.00
Power supply modules (5V d.c., 5A output)		
100-240V a.c. power supply	L61P	£145.00
24V d.c. input power supply	L63P	£231.00
24V d.c. input power supply (non-insulated)	L63SP	£199.00
Input modules (24V d.c. input, 4mA)		
16-channel (sink/source)	LX40C6	£138.50
32-channel (sink/source)*	LX41C4	£231.00
64-channel (sink/source)*	LX42C4	£361.00
Input module (100-120V a.c. input)		
16-channel input card	LX10	£140.00
Output modules		
8-channel; relay (independent common)	LY18R2A	£120.00
16-channel; relay	LY10R2	£153.00
16-channel; transistor (sink type)	LY40NT5P	£153.00
16-channel; transistor (source type)	LY40PT5P	£153.00
32-channel; transistor (sink type)	LY41NT1P	£153.00
32-channel; transistor (source type)	LY41PT1P	£270.00
64-channel; transistor (sink type)	LY42NT1P	£394.00
64-channel; transistor (source type)	LY42PT1P	£270.00
Analogue and temperature modules		
4-channel analogue to digital converter	L60AD4	£279.00
4-channel digital to analogue converter	L60DA4	£504.50
8-channel; analogue to digital converter (current)	L60ADIL8	£477.00
8-channel; analogue to digital converter (voltage)	L60ADVL8	£477.00
8-channel; digital to analogue converter (current)	L60DAIL8	£727.00
8-channel; digital to analogue converter (voltage)	L60DAVL8	£727.00
Multiple input voltage/current/temperature module	L60MD4-G	£346.00
Input/output module - 4 inputs & 2 isolated outputs	L60AD4-2GH	£533.00
Input/output module - 2 inputs & 2 outputs	L60AD2-DA2	£392.00
4-channel temperature control module, thermocouple	L60TCTT4	£691.00
4-channel temperature control module, thermocouple with wire break detection	L60TCTT4BW	£891.00
4-channel temperature control module, Pt100	L60TCRT4	£691.00
4-channel temperature control module, Pt100 with wire break detection	L60TCRT4BW	£891.00
Communication modules		
2-channel; 1 x RS232 and 1 x RS485	LJ71C24	£360.00
2-channel; 2 x RS232	LJ71C24-R2	£360.00

* An A6CON1 or A6CON4 I/O connector is required – see page 316 for price detail

Continued on next page



Software Selector Guide – See page 313

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L-series compact modular PLCs (continued)



Features

- 24 points of on board I/O
- 2-channel high speed counter
- 2-axes of positioning
- Pulse catch and interrupt functions
- Ethernet connectivity
- Built-in data logging
- Fully compatible with iQ Works and GX Works2 software



LD77 position control module



A6CON1 40-pin I/O connector

Software Selector Guide

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Description	Order Code	List Price
Networking modules		
Serial programming module; RS232; 115.2kbps	L6ADP-R2	£181.50
CC-Link module; master/local	LJ61BT11	£181.50
CC-Link IE Field module; master/local	LJ71GF11-T2	£625.00
CC-Link IE field network head module for I/O modules	LJ72GF15-T2	£360.00
6-channel I/O link master module	ME11OL6-L	£528.00
Ethernet interface module with Modbus TCP/IP & BACnet	LJ71E71-100	£576.00
Profibus DP interface master module V1/V2/V3 protocols	ME1PB1-L	£540.00
Extension modules and cables		
Branch extension module; IN, with end cap	L6EXE	£126.50
Branch extension module; OUT	L6EXB	£126.50
Branch cable; 0.6m	LC06E	£42.50
Branch cable; 1m	LC10E	£63.50
Branch cable; 3m	LC30E	£148.00
Positioning modules		
2-channel high speed counter module; 200kHz, 5/12/24V d.c. input*	LD62	£666.00
2-channel high speed counter module; 500kHz, RS422 input*	LD62D	£666.00
4-axis pulse output position control module (open-collector)*	LD75P4	£1,227.00
4-axis pulse output position control module (differential line-driver)*	LD75D4	£1,227.00
SSCNET III/H position control modules		
2-axis SSCNET III/H position control module	LD77MS2	£579.00
4-axis SSCNET III/H position control module	LD77MS4	£985.00
16-axis SSCNET III/H position control module	LD77MS16	£1,734.00
26-way terminal block for modules above	TB-26-EG	£23.00
Connecting cable for TB-26-EG; 0.5m	MR-ESTBL-CN1-05M-EG	£38.50
Connecting cable for TB-26-EG; 1m	MR-ESTBL-CN1-1M-EG	£42.00
Software		
Q-Motion Controller programming software 2 license	MT Works2 V01-2L0C-E	£1,402.00
Accessories		
Display module; 16 character x 4 lines, CPU mount	L6DSPU	£206.50
End cover with error terminal	L6EC-ET	£88.00
40-pin I/O connector; straight, soldering type	A6CON1	£26.50
40-pin I/O connector; angled, soldering type	A6CON4	£24.50
A6CON connection cable - open ended; 3m	Q-L-40CBL-3M	£59.50
A6CON to TB-40-UK connection cable; 1.5m	Q-L-TB40CAB-1.5M	£95.00
Terminal block for use with A6CON	TB-40-UK	£42.50
8-channel output block - screw terminal	TB-8EY-S	£59.00
Set of 8 relays for 8-channel output block	TB-8-RELAY-6A	£30.00
Set of 8 transistors for 8-channel output block	TB-8-TRANSISTOR-2A	£94.00
16-channel input block - screw terminal	TB-16EX-S	£42.00
Connection cable for 2 x terminal blocks; 3m	L-series-TB-EY-CAB-3M	£117.00
2GB SD memory card	L1MEM-2GBSD	£16.50
4GB SD memory card	L1MEM-4GBSD	£23.00
CPU battery	Q6BAT	£26.00
USB cable, USB A to USB B (mini); 5m	USB-CAB-5M	£9.00

* An A6CON1 or A6CON4 I/O connector is required – see accessories for price detail



L-series motion control packs

L-series motion control packs are an easy solution to your motion control application.

Packs consist of:



● Simple motion module

2-, 4- or 16-axis SSCNET III/H

● Power supply

100-240V a.c. or 24V d.c.

● CPU

20K or 60K step memory

● End plate

Pack consists of:	No. of Axes	CPU Memory	Power supply	Ident No.	Order Code	List Price
LD77MS2, L02CPU-P, L61P set, end plate	2	20K step	100-240V a.c.	270354	MR-J4 L-Motion Pack 1	£1,363.00
LD77MS4, L02CPU-P, L61P set, end plate	4	20K step	100-240V a.c.	270365	MR-J4 L-Motion Pack 2	£1,734.00
LD77MS16, L02CPU-P, L61P set, end plate	16	20K step	100-240V a.c.	270366	MR-J4 L-Motion Pack 3	£2,360.00
LD77MS2, L02CPU-P, L63P set, end plate	2	20K step	24V d.c.	270367	MR-J4 L-Motion Pack 4	£1,480.00
LD77MS4, L02CPU-P, L63P set, end plate	4	20K step	24V d.c.	270696	MR-J4 L-Motion Pack 5	£1,839.00
LD77MS16, L02CPU-P, L63P set, end plate	16	20K step	24V d.c.	270697	MR-J4 L-Motion Pack 6	£2,445.00
LD77MS2, L06CPU-P, L61P set, end plate	2	60K step	100-240V a.c.	270698	MR-J4 L-Motion Pack 7	£1,737.00
LD77MS4, L06CPU-P, L61P set, end plate	4	60K step	100-240V a.c.	270699	MR-J4 L-Motion Pack 8	£2,167.00
LD77MS16, L06CPU-P, L61P set, end plate	16	60K step	100-240V a.c.	270700	MR-J4 L-Motion Pack 9	£2,732.00

Please note: MR-J3 servos are supported by the LD77MS module by parameter setting
They do not include the PLC or the LD77 connectors



Do you need Technical Support?

We can help with that ...

01254 685900

iQ-R-series modular PLCs

NEW



The iQ-R-series PLC/PAC offers PC performance in a PLC, designed to act as the core in a next generation automated system. The iQ-R-series allows you to integrate sequence, motion, safety, process, PC, CNC and robot on a single backplane.

Features

● Advanced information modules

Modules designed to optimise production systems through offering direct connectivity between an IT system and the shop floor. Modules include the MES interface module, OPC UA server module, high speed data logger module and the C intelligent function module.

● Digital I/O modules

A single MELSEC iQ-R input module can handle different input types in one module allowing substantial reduction in overall footprint of up to 20% and a reduction in total system costs of up to 60%.

● High speed counter module

Capable of measurements at up to 8m pulses/s.

● Motion control

Simple motion modules up to 32 axes are available and linear/circular and helical interpolation can be achieved with 4 axis positioning modules.

● Communication & network modules

The serial communication modules offer protocols such as Modbus and CANopen. Ethernet, CC-Link, CC-Link IE Field and BACnet for building automation modules are also available. CC-Link IE Field BASIC Master is built into all iQ-R PLCs. Support for up to 64 stations (16 stations x 4 groups).

Technical specification

I/O points Up to 64 modules
or 4092 points

Program capacity 40 to 1200k steps

Instruction processing time . . . 0.98ns per
KD instruction

Ambient temperature 0 to 40°C

MELSEC iQ-R MITSUBISHI ELECTRIC

Description	Order Code	List Price
CPU modules with built in CC-Link IE		
40k step memory	R04ENCPU	£1,324.00
80k step memory	R08ENCPU	£2,288.00
160k step memory	R16ENCPU	£5,033.00
320k step memory	R32ENCPU	£6,932.00
1200k step memory	R120ENCPU	£9,995.00
Multi CPU modules		
40k step memory	R04CPU	£1,324.00
80k step memory	R08CPU	£2,288.00
160k step memory	R16CPU	£5,033.00
320k step memory	R32CPU	£6,932.00
1200k step memory	R120CPU	£9,995.00
Power supply modules		
100-240V a.c. input, 5V d.c., 6A output	R61P	£160.00
100-240V a.c. input, 5V d.c., 3A, 24V d.c. 0.6A output	R62P	£199.00
24Vd.c. input, 5V d.c., 6A output	R63P	£255.00
100-240V a.c. input, 5V d.c., 8.5A output	R64P	£271.00
Main base units		
5 I/O slots and 1 PSU slot	R35B	£144.00
8 I/O slots and 1 PSU slot	R38B	£207.00
12 I/O slots and 1 PSU slot	R312B	£247.00
Extension base units		
5 I/O slots and 1 PSU slot	R65B	£144.00
8 I/O slots and 1 PSU slot	R68B	£207.00
12 I/O slots and 1 PSU slot	R612B	£247.00
Input modules		
16-channel, 100-120V a.c., screw terminal	RX10	£164.00
16-channel, 24V d.c., sink/source, screw terminal	RX40C7	£153.00
32-channel, 24V d.c., sink/source, connector A6CONn*	RX41C4	£257.00
64-channel, 24V d.c., sink/source, connector A6CONn*	RX42C4	£524.00
Output modules		
16-channel; relay 240V a.c./24V d.c., screw terminal	RY10R2	£218.00
16-channel; transistor, 12-24V d.c., sink, screw terminal	RY40NT5P	£185.00
32-channel; transistor, 12-24V d.c., sink, connector A6CONn*	RY41NT2P	£297.00
64-channel transistor, 12-24V d.c., sink, connector A6CONn*	RY42NT2P	£594.00
16-channel transistor, 12-24V d.c., source, screw terminal	RY40PT5P	£185.00
32-channel transistor, 12-24V d.c., source, connector A6CONn*	RY41PT1P	£297.00
64-channel transistor, 12-24V d.c., source, connector A6CONn*	RY42PT1P	£594.00
Analogue input modules		
4-channels, ± 32000 , -10 to +10V, 0-20mA	R60AD4	£307.00
8-channels, ± 32000 , -10 to +10V	R60ADV8	£554.00
8-channels, 0-32000, 0-20mA	R60ADI8	£554.00
Analogue output modules		
4-channels, ± 32000 , -10 to +10V, 0-20mA	R60DA4	£555.00
8-channels, ± 32000 , -10 to +10V	R60DAV8	£841.00
8-channels, 0-32000, 0-20mA	R60DAI8	£841.00
Temperature input modules		
8-channels, RTD	R60RD8-G	£742.00
8-channels, thermocouple	R60TD8-G	£791.00
4-channels, thermocouple	R60TCRT2T2	£794.00
4-channel unit	R60TCRT4	£794.00
2-channels multi-input, 2-channel thermocouple	R60TCRT2T2BW	£794.00
4-channels, RTD input	R60TCRT4BW	£1,032.00

* A6CONn (not supplied) = A6CON1, A6CON2, A6CON3, A6CON4

iQ-R-series modular PLCs (continued)



R6 IP power supply module



Serial communication modules

Description	Order Code	List Price
Serial communication modules		
2-channel module; 1 x RS232 and 1 x RS485	RJ71C24	£559.00
2-channel module; 2 x RS232	RJ71C24-R2	£559.00
2-channel; 2 x RS485/RS422	RJ71C24-R4	£559.00
Networking modules		
CC-Link IE Field module; master/local	RJ71GF11-T2	£358.00
Ethernet interface module	RJ71EN71	£860.00
CC-Link IE network dual loop fibre module	RJ71GP21-SX	£1,099.00
CC-Link module; master/local	RJ61BT11	£211.00
MES module and configuration software	RD81MES96	£2,225.00
Positioning modules		
2-axis pulse output module, open-collector	RD75P2	£938.00
4-axis pulse output module, open-collector	RD75P4	£1,350.00
2-axis pulse output module, differential line-driver	RD75D2	£938.00
4-axis pulse output module, differential line-driver	RD75D4	£1,350.00
2-channel high speed counter module, 200kHz, sink	RD62P2	£733.00
2-channel high speed counter module, 8MHz, sink	RD62D2	£733.00
2-channel high speed counter module, 200kHz, source	RD62P2E	£801.00
2-axis SSCNET III/H Motion control module (R)	RD77MS2	£655.00
4-axis SSCNET III/H Motion control module (R)	RD77MS4	£1,013.00
8-axis SSCNET III/H Motion control module (R)	RD77MS8	£1,195.00
16-axis SSCNET III/H Motion control module (R)	RD77MS16	£1,275.00
4-axis simple motion module for CC-Link IE Field Network	RD77GF4	£1,013.00
8-axis simple motion module for CC-Link IE Field Network	RD77GF8	£1,195.00
16-axis simple motion module for CC-Link IE Field Network	RD77GF16	£1,275.00
Bus cables		
Connection cable between base units, 0.6m	RC06B	£72.00
Connection cable between base units, 1.2m	RC12B	£98.00
Connection cable between base units, 3.0m	RC30B	£131.00
Connection cable between base units, 5.0m	RC50B	£220.00
Memory cards		
1Mb SRAM card	NZ2MC-1MBS	£292.00
2Mb SRAM card	NZ2MC-2MBS	£488.00
4Mb SRAM card	NZ2MC-4MBS	£788.00
8Mb SRAM card	NZ2MC-8MBS	£1,050.00
Accessories		
CPU battery	Q6BAT	£26.00
Din rail adaptor	R6DIN1	£14.00
Dummy unit	RG60	£17.50
37-pin connector; soldering type	A6CON1E	£24.50
40-pin connector; straight, soldering type	A6CON1	£26.50
40-pin connector; straight, crimp type	A6CON2	£26.00
40-pin connector; straight, wrap type	A6CON3	£22.50
40-pin connector; angled, soldering type	A6CON4	£24.50

Software Selector Guide



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Q-series modular PLCs



The Q-series PLC is designed to be at the heart of your manufacturing process, as it is at the heart of Mitsubishi's component automation concept. It offers total integration of your control and communication needs from a single platform – connecting your automation with your business needs.

Features

- Pulse catch & interrupt modules**
 Digital input modules for pulse storage and processing subroutines
- Communications modules**
 Modules with RS232/RS422/RS485 interface for peripheral connection or PLC-PLC communication
- Network modules**
 Ethernet, CC-Link, CC-Link IE, ProfiBus, Modbus, TCP/RTU, DeviceNet, AS-interface and Mitsubishi MELSEC networks
- Digital input/output modules**
 For various signal levels with transistor relay or triac switches
- Analogue input/output modules**
 For processing current/voltage signal, temperature value acquisition and temperature control with direct connection of Pt100 resistance thermometers or thermocouples. A HART enabled module for current input is also available
- Positioning modules**
 High-speed counter modules allow connection of incremental shaft encoder or multiaxial positioning modules (for servo and step drives). Up to 8 axes per module

Technical specification

I/O points Up to 8192
 Program cycle period 0.0095-0.2µs
 Ambient temperature 0 to 55°C
 Memory 10-1000K steps

Description	Order Code	List Price
CPU modules		
5 slot base and PSU - 10k step memory	Q00UCPU	£401.00
Multi processor capability - 10k step memory	Q00UCPU	£368.00
Multi processor capability - 15k step memory	Q01UCPU	£456.50
Multi processor capability - 20k step memory	Q02UCPU	£962.00
Multi processor capability - 30k step memory	Q03UDCPU	£1,084.00
Multi processor capability - 40k step memory	Q04UDHCPU	£1,867.00
Multi processor capability - 60k step memory	Q06UDHCPU	£2,043.00
Ethernet enabled, data logger - 30k step memory	Q03UDVCPU	£1,324.00
Ethernet enabled, data logger - 40k step memory	Q04UDVCPU	£2,108.00
Ethernet enabled, data logger - 60k step memory	Q06UDVCPU	£2,288.00
Power supply modules*		
24V d.c. input; 5V d.c. 6A output	Q63P	£231.00
100-240V a.c. input; 5V d.c. 6A output	Q61P	£145.00
100-240V a.c. input; 5V d.c. 3A or 24V d.c. 0.6A output	Q62P	£180.50
100-240V a.c. input; 5V d.c. 8.5A output	Q64PN	£246.00
Main base units		
5 I/O slots and 1 PSU slot	Q35B	£130.50
High speed, 5 I/O slots and 1 PSU slot	Q35DB	£227.00
8 I/O slots and 1 PSU slot	Q38B	£188.00
12 I/O slots and 1 PSU slot	Q312B	£224.50
Extension base units		
5 I/O slots and 1 PSU slot	Q65B	£119.00
8 I/O slots and 1 PSU slot	Q68B	£180.50
12 I/O slots and 1 PSU slot	Q612B	£231.00
5 I/O slots (no PSU slot)	Q55B	£119.00
Input modules		
8-channel, 100-120V a.c.	QX28	£138.50
16-channel, 100-120V a.c.	QX10	£138.50
16-channel, 24V d.c. (positive common)	QX40-S1	£149.00
16-channel, 24V d.c. (negative common)	QX80	£138.50
32-channel, 24V d.c. (negative common)	QX81	£233.00
Output modules		
8-channel; relay	QY18A	£152.00
16-channel; relay	QY10	£158.00
16-channel; triac	QY22	£268.00
16-channel; transistor (sink type)	QY40P	£153.00
16-channel; transistor (source type)	QY80	£158.00
32-channel; transistor (source type)	QY81P	£266.50
Analogue input modules		
4-channel	Q64AD	£279.00
4-channel; galvanically isolated	Q64AD-GH	£491.00
8-channel; voltage	Q68ADV	£503.50
8-channel; current	Q68ADI	£503.50
8-channel; voltage or current	Q68AD-G	£674.00
4-channel input/2-channel output combined module	Q64AD2DA	£558.00
Analogue output modules		
2-channel; voltage or current	Q62DAN	£329.50
4-channel; voltage or current	Q64DAN	£504.50
8-channel; voltage	Q68DAVN	£764.00
8-channel; current	Q68DAIN	£764.00

* Refer to page 312 for stand-alone 24V d.c. power supplies from 2.5 to 40A (PSU-25 etc.)

Q-series modular PLCs (continued)



QJ71 ProfiBus module

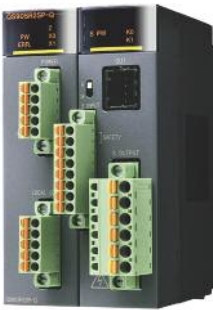


QJ71 MES module

Plant-wide operations rely on good communication strategies. The Mitsubishi Q-series can support over 50 different forms of communication, including standard RS232, fieldbuses, Ethernet, web servers & redundant networks.

Description	Order Code	List Price
Temperature input modules		
4-channel thermocouple input module	Q64TD	£406.00
4-channel thermocouple and millivolt input module	Q64TDV-GH	£430.50
4-channel Pt100 temperature input module	Q64RD	£381.50
Load cell input module	Q61LD	£1,297.00
Serial communication modules		
2-channel module; 1 x RS232 and 1 x RS422/RS485	QJ71C24N	£374.50
2-channel module; 2 x RS232	QJ71C24N-R2	£374.50
2-channel module; 2 x RS422/RS485	QJ71C24N-R4	£508.50
Networking modules		
Ethernet module	QJ71E71-100	£781.00
MELSECNET/H module; master/local, fibre optic cable	QJ71LP21GE	£1,038.00
MELSECNET/H module; master/local, coaxial cable	QJ71BR11	£781.00
MELSECNET/H module; master/local, twisted pair cable	QJ71NT11B	£674.00
CC-Link module; master/local	QJ61BT11N	£181.50
CC-Link IE Field module; master/local	QJ71GF11-T2	£676.00
DeviceNet module; master	QJ71DN91	£906.00
ProfiBus DP module; master	QJ71PB92V	£602.00
ProfiBus DP module; slave	QJ71PB93D	£602.00
AS-interface module; dual master	QJ71AS92	£415.50
Modbus/TCP module; master/slave	QJ71MT91	£1,415.00
Modbus serial module; master/slave	QJ71MB91	£538.00
MES module and configuration software	QJ71MES96	£2,225.00
Datalogger module and configuration software	QD81DL96	£1,666.00
Positioning modules		
2-channel high speed counter module	QD62E	£666.00
Interrupt module; 16 inputs	QI60	£284.00
Accessories		
RS232 programming cable; 3m	QC30R2	£51.50
USB programming cable; 3m	QC30-USB	£11.00
CPU battery	Q6BAT	£26.00
Dummy unit	QG60	£17.50
32-way terminal block	FA-TB32XY	£76.00
Connection cable with 32-pin connector; 1.5m	FA-CBL20DMFX	£48.75
Connection cable with 32-pin connector; 3m	FA-CBL20DMFY	£79.00
40-way terminal block	FA-TBS40P	£68.00
Connection cable with 40-pin connector; 1.5m	FA-CBL20FMVE	£46.00
Connection cable with 40-pin connector; 3.0m	FA-CBL20FMV-M	£60.00
Connection cable with built in I/O; 3m	Q40CBL-3M	£67.50
37-pin connector; soldering type	A6CON1E	£24.50
40-pin connector; straight, soldering type	A6CON1	£26.50
40-pin connector; angled, soldering type	A6CON4	£24.50
DIN rail adaptor for Q38B/Q312B/Q68B/Q612B	Q6DIN1	£12.00
0.6m extension cable	QC06B	£65.00
1.2m extension cable	QC12B	£89.00
1Mb SRAM memory card	Q2MEM-1MBS	£180.50
2Mb SRAM memory card	Q2MEM-2MBS	£328.00
Q-Motion Controller programming software 2 license	MT Works2 V01-2L0C-E	£1,402.00

Q-series safety PLCs



Mitsubishi provides a total safety solution incorporating safety control and drive devices with safety components required for functional safety systems.

This allows visualisation of safety information, maintaining optimal safety control and boosting productivity.

Safety PLC and relay modules:

- Safety relay modules are suitable for small-scale safety control
- A safety circuit can be configured without complex parameter settings
- Safety control can easily be added to an existing Q-series PLC by connecting the safety relay module to the base unit or CC-Link
- Operating/error status of the safety relay module can be monitored from the existing Q-series PLC, identifying the cause of emergency stop or error

Technical specification

I/O capacity ... 6144 (max. 1008 safety I/O)
 Program memory capacity ... 14kSteps
 Basic instruction execution time ... 0.10µs
 I/O ... Distributed blocks on CC-Link safety
 I/O types available ... 8 dual in/4 dual out;
 8 dual in; 4 dual out
 Diagnostic capabilities ... 3,000 records
 for operation & error messages
 Network connectivity ... CC-Link Safety,
 CC-Link IE, MELSECNET/H, Ethernet

EN 954-1 Category	Cat 4
EN ISO 13849-1 Performance Level	PLe
EN 62061 SIL Claim	SIL CL 3

Q-series safety PLC

Description	Order Code	List Price
Safety PLC CPU	QS001CPU	£1,764.00
Base rack	QS034B-E	£223.50
CC-Link module; master	QS0J61BT12	£605.00
CC-Link IE module; network master	QS0J71GF11-T2	£2,208.00
8-input/4-output extension module	QS0J65BTB1-12DT	£764.00
8-input extension module	QS0J65BTS2-8D	£606.00
4-output extension module	QS0J65BTS5-4T	£546.00
PSU; 110V a.c.	QS061P-A1	£494.50
PSU; 240V a.c.	QS061P-A2	£494.50

Q-series safety relay modules

Description	Order Code	List Price
Input module; positive common	QS90SR2SP-Q	£154.00
Input module; positive and negative common	QS90SR2SN-Q	£154.00
CC-Link input module; positive and negative common	QS90SR2SN-CC	£212.50
Input extension module; positive common	QS90SR2SP-EX	£149.00
Input extension module; positive and negative common	QS90SR2SN-EX	£149.00
Extension cable; 0.1m	QS90CBL-SE01	£19.50

Struggling to find what you need?

We can help with that ...

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01254 685900

Chippenham
01249 460099



u-Remote – IP20 remote I/O

Weidmüller



u-Remote is a remote I/O concept, focusing on faster installation, reduced downtime, safer start-up to provide improved performance and greater productivity.

Thanks to their narrow design and reduced power-feed module requirements, u-Remote can reduce the size of your I/O. Tool free assembly, modular design and an integrated web server speeds up installation time and status LEDs on the channel and each module gives reliable diagnosis and rapid service.

Modularity

The modular structure offers flexible system design and fast installation, while ensuring reliable start-up and minimum system downtime. It can also reduce wiring mistakes and system start-up time.

Local and remote testing

An integrated web server in the coupler allows on-site or remote testing, diagnostics or the simulation of inputs and forcing of outputs.

Improved system availability

A permanent base allows electronics to be replaced without interrupting communication or the power supply to your remote I/O system.

Fast with huge power reserves

High-speed system bus provides up to 256 DI/DOs in 20 μ s. The system has two separate 10A supply paths & an internal, high-capacity supply path for station operation. This reduces the number of power-feed modules, so just one power supply operates 64 modules on the coupler.

Coupler technical specification

Supply voltage 24V d.c.
 Feed current 10A
 Operating temperature . . -20 to +60°C
 Dimensions h120 x w52 x d76mm

Modules technical specification

Supply voltage 24V d.c.
 Transmission rate 48Mbit/s
 Galvanic Isolation . . . 500V d.c. between current paths
 Operating temperature . . -20 to +60°C
 Dimensions h120 x w11.5 x d76mm

Description	Order Code	List Price
Field bus couplers		
CANopen	1334890000	£264.98
DeviceNet	1334900000	£264.98
EtherCAT	1334910000	£253.46
Ethernet IP	1334920000	£276.51
Modbus TCP	1334930000	£276.51
Profibus DP-V1	1334870000	£218.35
ProfiNET IRT	1334880000	£276.51
Digital input modules		
4 channels	1315170000	£28.75
8 channels; 3-wire	1394400000	£42.40
16 channels	1315200000	£69.68
16 channels; PLC interface	1315210000	£77.43
Digital output modules		
4 channels	1315220000	£31.38
8 channels	1315240000	£50.88
16 channels	1315250000	£70.79
16 channels; PLC interface	1315270000	£77.43
4 channels; relay	1315550000	£72.99
Analogue input modules		
4 channels; 16 bits	1315620000	£179.73
4 channels; 12 bits	1394390000	£132.72
8 channels; 16 bits, PLC interface	1315670000	£161.29
4 channels; thermocouple	1315710000	£170.98
4 channels; RTD	1315700000	£161.76
Analogue output module		
4 channels; current/voltage	1315680000	£165.90
Power supply modules		
10A power supply input module	1334710000	£28.75
10A power supply output module	1334740000	£28.75
16 channel distribution modules		
Potential distribution module; input current path	1334770000	£19.91
Potential distribution module; output current path	1334780000	£19.91
Potential distribution module; functional earth	1334790000	£19.91
Grounding distribution module; input current path	1334800000	£19.91
Grounding distribution module; output current path	1334810000	£19.91
Safety modules		
SIL single channel	1335030000	£154.85
SIL 2-channel	1335050000	£165.90
Accessories		
Empty slot module	1315770000	£15.48
Termination kit	1346610000	£6.65
Swivel marker (pack of 20)	1339920000	£17.80

This is a core selection of the I/Os available, further options are available, please contact sales for more information.

E3 series - Rugged Ethernet I/O modules



The E3 series modules provide simple and secure remote monitoring for sites located in harsh environments. With the rugged environmental ratings, they are ideal for both control rooms and extreme locations across industries.

These compact DIN-rail mountable IO modules support open-standard protocols to provide flexible communication options for existing or newly installed Ethernet networks.

By seamlessly replacing external devices such as switches, data concentrators and protocol converters, these IO modules transcend simple IO capabilities to cost effectively streamline systems and improve reliability.

All units can be configured/programmed using Crimson software which is available to download free of charge from the Red Lion Controls website – www.redlion.net.

Range features

- Flexible mix of I/O channels support all instrumentation needs
- Real time ring for fast redundancy
- Dual independent Ethernet ports enable flexible networking
- Built-in security pro-actively blocks unwanted access
- Extensive health diagnostics and reporting reduce downtime
- Standard Modbus protocols provide universal compatibility
- Rugged design supports extreme temperatures and hazardous locations

Technical specification

Power Supply	12-24V d.c.
Supply current	150 to 355mA (without any load current)
I/O registers	512 discrete inputs and outputs 256 analogue I/O
Ethernet ports	10/100BaseTX (auto-detecting) RJ45 connection
Protocols supported	TCP/IP, ARP, UDP, ICMP, DHCP, HTTP, Modbus UDP/TCP slave mode, Sixnet UDR UDP/TCP slave mode and Sixnet UDR UDP master mode
Ethernet modes	Real-Time ring rated at 30mS plus 5mS per hop, Dual network with unique MAC and IP address, Pass-through daisy chain
RS485 Serial port	2 wire half duplex screw terminal connection
Secure web access	Password protected
Diagnostics	Via LEDs
Operating temperature	-40 to +75°C
Construction	Aluminium base with zinc coated steel cover
Configuration	Programmed by Crimson software

Description	Function				Order Code	List Price
	Digital I/P	Digital O/P	Analogue I/P	Analogue O/P		
32 mixed inputs/outputs*	20	8	8	4	E3-MIX20884-1	£499.00
32 mixed inputs/outputs*	24	8	8	–	E3-MIX24880-1	£364.00
34 mixed inputs/outputs*	24	8	8	2	E3-MIX24882-1	£417.00
32 24V digital inputs	32	–	–	–	E3-32DI24-1	£281.00
16 24V digital inputs	16	–	–	–	E3-16DI24-1	£281.00
16 120V a.c. digital inputs	16	–	–	–	E3-16DIAC-1	£281.00
32 24V digital outputs	–	32	–	–	E3-32DO24-1	£281.00
16 24V digital outputs	–	16	–	–	E3-16DO24-1	£281.00
16 digital output relays	–	16	–	–	E3-16DORLY-1	£281.00
16 4-20mA isolated analogue inputs	–	–	16	–	E3-16ISO20M-1	£491.00
32 20mA analogue inputs	–	–	32	–	E3-32AI20M-1	£491.00
32 10V d.c. analogue inputs	–	–	32	–	E3-32AI10V-1	£491.00
16 analogue inputs (4-20mA)	–	–	16	–	E3-16AI20M-1	£420.00
16 analogue inputs/8 analogue outputs	–	–	16	8	E3-16AI8AO-1	£491.00
8 analogue outputs	–	–	–	8	E3-8AO20M-1	£263.00
16 isolated thermocouple inputs	–	–	16TC	–	E3-16ISOTC-1	£491.00
10 RTD inputs	–	–	10 RTD	–	E3-10RTD-1	£306.00

* The digital inputs and outputs are software configurable on these units, maximum digital I/O must not exceed 20 or 24 depending on model.

Crimson software is available to download free of charge from www.redlion.net

CC-Link IE Field - 1 Gbit/s industrial Ethernet



CC-Link IE Field



CC-Link IE Field is the first Industrial Ethernet network to operate at gigabit speeds at the field device level. It combines the best of existing technologies and applies them in highly reliable architecture that provides exceptional data bandwidth.

CC-Link IE Field provides seamless control data transmission between controllers such as PLCs and field devices, digital and analogue I/O, pneumatic valve manifolds, RFID readers, inverters, motion controllers and other products.

It connects up to 120 stations on a single network with deterministic data exchange at gigabit speed without Ethernet switches

Features

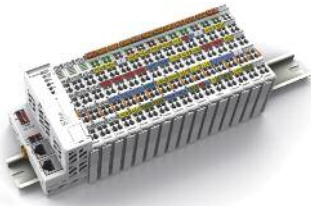
- Ultra-high speed - 1GB data transmission
- Flexible topologies - star, line or loop architectures
- Sub-master function

Description	Order Code	List Price
L-Series network master/local module	LJ71GF11-T2	£625.00
L-Series I/O module network head module	LJ72GF15-T2	£360.00
Q Series network master/local module	QJ71GF11-T2	£676.00
QS Series network master/local module	QS0J71GF11-T2	£2,208.00
Network board for connecting a personal computer	Q818D-J71GF11-T2	£1,858.00
Network simple motion board - 16 axes	MR-EM340GF	£734.00
Ethernet interface module for MR-J4 servo amplifiers	MR-J3-T10	£300.00
A800 a.c. inverter network interface module	FR-A8NC	£138.00
GOT2000/1000 HMI network communication unit	GT15-J71GF13-T2	£569.00
SLMP Ethernet adapter unit	NZ2GF-ETB	£1,172.00
2 channel high speed counter module	NZ2GFCF-D62PD2	£656.00
CC-Link bridge module	NZ2GF-CCB	£225.00
16 points input, 24V d.c. module, terminal block type	NZ2GF2B1N-16D	£247.00
16 points output, 12-24V d.c. module, transistor output (sink)	NZ2GF2B1N-16T	£257.00
16 points output, 12-24V d.c. module, transistor output (source)	NZ2GF2B1N-16TE	£257.00
32 inputs DC; 1-wire (sink/source)	NZ2GF2B1-32D	£455.00
32 transistor outputs; 0.5A/channel; 1-wire (source)	NZ2GF2B1-32TE	£633.00
4 channel analogue input: -10-10V d.c., 0-20mA DC	NZ2GF2BN-60AD4	£570.00
4 channel analogue output: -10-10V d.c., 0-20mA DC	NZ2GF2BN-60DA4	£570.00
32 points PNP/NPN input, 40 pin connector	NZ2GFCF1-32D	£403.00
Extension unit, 16 DC input, spring clamp terminal	NZ2EX2S1-16D	£248.00
Extension unit, 16 PNP output, spring clamp terminal	NZ2EX2S1-16TE	£248.00
Spring clamp terminal, 16 DC input	NZ2GF2S1-16D	£271.00
Spring clamp terminal, 16 PNP output	NZ2GF2S1-16TE	£271.00
Spring clamp terminal, 16 relay output	NZ2GF2S2-16R	£550.00
Extension unit, 16 DC input, screw terminal	NZ2EX2B1N-16D	£190.00
Extension unit, 16 PNP output, screw terminal	NZ2EX2B1N-16TE	£197.00
4 channel thermocouple input, NPN output	NZ2GF2B-60TCTT4	£899.00
4 channel RTD input, NPN output	NZ2GF2B-60TCRT4	£899.00
16 PNP input, IP67 rated	NZ2GF12A4-16DE	£649.00
16 PNP output, IP67 rated	NZ2GF12A4-16TE	£649.00
8 PNP in, 8 PNP out, IP67 rated	NZ2GF12A42-16DTE	£649.00
Switching hub, 8 ports, 1Gbps, DIN rail	NZ2EHG-T8N	£485.00
Switching hub, 8 ports + 2 fibre, 1Gbps, DIN rail	NZ2MHG-T8F2	£485.00
Multi-mode transceiver, 850nm, 1000Base-SX	LM28-C3S-TI-N-ET	£72.00
Single-mode transceiver, 1310nm, 12dB margin	LS38-C3S-TI-N-TT	£72.00
Media converter, single mode optical fibre cable (up to 15km)	DMC-1000SL-DC	£2,145.00

Cat6E Ethernet cables (green)

Description	Order Code	List Price
Internal patch cable; 1m	CC-Link-IE-Field-Cable-1M-L	£8.00
Internal patch cable; 3m	CC-Link-IE-Field-Cable-3M-L	£11.00
Internal patch cable; 5m	CC-Link-IE-Field-Cable-5M-L	£17.50
Internal patch cable; 10m	CC-Link-IE-Field-Cable-10M-L	£25.00
Superflex patch cable; 10m	CC-Link-IE-Field-Cable-10M-H	£133.50
Superflex patch cable; 20m	CC-Link-IE-Field-Cable-20M-H	£212.50
Superflex patch cable; 100m	CC-Link-IE-Field-Cable-100M-H	£855.00

STlite series - scalable industrial network interface



Ideal for a range of applications, STlite features excellent module granularity and fieldbus agnostic design, making it ideally suited for the requirements of today's distributed fieldbus systems.

The devices are optimised for efficient process level communication, with scalable performance and high integration density.

- The range of potential applications is virtually unlimited
- Reduces hardware and system overheads to a minimum
- Simplifies handling and maximises efficiency
- Safe investment
- Clear labelling

Technical specification

Number of I/O modules Up to 64
 Operating temperature 0 - 55°C
 Supply voltage 24V d.c.
 Wire connection Cage clamp

Description	Order Code	List Price
Head stations		
ProfiBus DP/V1, 12Mbaud head station	STL-PB1	£264.00
Ethernet ECO coupler, Modbus TCP/IP head station	STL-ETH1	£264.00
CC-Link 156kbaud to 10Mbaud head station	STL-BT1	£264.00
CC-Link fieldbus connector for CC-Link head station	STL-CClink-con	£22.00
Power supplies		
24V d.c., power supply for field devices	STL-PS	£16.00
24V d.c. power supply for field devices and 5V d.c. bus supply	STL-BPS	£121.00
Digital input modules		
8 digital inputs, 24V d.c., 0.2mS response	STL-DI8-V1	£52.00
8 digital inputs, 24V d.c., 3.0mS response	STL-DI8-V2	£52.00
Digital output modules		
4 digital outputs, 24V d.c., 0.5A source type	STL-DO4	£35.00
8 digital outputs, 24V d.c., 0.5A source type	STL-DO8	£58.00
Relay output modules		
2 N/O relay contacts, 230V a.c., 30V d.c., 2A	STL-RO2	£48.00
Analogue input modules		
2 voltage inputs, 0-10V d.c. single ended	STL-AD2-V	£175.00
2 current inputs; 4-20mA single ended	STL-AD2-I	£175.00
4 voltage inputs, 0-10V d.c. single ended	STL-AD4-V1	£156.00
4 voltage inputs, ±10V d.c. single ended	STL-AD4-V2	£181.00
4 current inputs, 4-20mA, single ended	STL-AD4-I	£181.00
2 temperature inputs, Pt100 or resistance sensor	STL-TI2	£211.00
Analogue output modules		
2 voltage outputs, 0-10V d.c.	STL-DA2-V	£185.00
2 current outputs, 4-20mA	STL-DA2-I	£185.00
4 voltage outputs, 0-10V d.c.	STL-DA4-V1	£156.00
4 voltage outputs, ±10V d.c.	STL-DA4-V2	£196.00
4 current outputs, 4-20mA	STL-DA4-I	£177.00
Additional modules		
Input module for incremental encoder	STL-ENC	£247.00
Input module with forward/reverse counter, 24V d.c., 100KHz	STL-C100	£197.00
Input module with SSI encoder interface, 24 bit, 125KHz	STL-SSI	£230.00
Bus end module	STL-ET	£13.00



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