

# **EZPLC™**

## **The most SENSIBLE modular PLC**



*... innovative and competitive !*

# EZPLC™

The Most **SENSIBLE** Micro Modular PLC Ever Built!

**EZPLCJr** starting at £ **69**



## EZPLC 32 I/O

**Choice of four I/O bases: 32, 48, 64 or 96 with Power Supply, CPU and 2 COM ports**

### What is EZPLC?

EZPLC is the most innovative PLC in its class. It is packed with power only found in high end PLC's that cost 3 to 5 times more. It also supports the most flexible I/O in the industry.

### What does it have?

- 8-96 Local I/O expandable to 2048 I/O
- Extremely flexible 8 point I/O models

- Total Program/Data memory 64K
- Fast scantime, 3ms for 1K instructions
- Powerful Ladder Logic instruction set
- Patent Pending Free Flow Logic
- Two integrated communication ports RS232 and RS422/485
- Supports ASCII In/Out instructions
- Built-in RealTime clock/calendar
- Ethernet, DeviceNet, Profibus option
- Extremely cost effective Analog I/O
- 100 kHz counter module with PLS outputs
- Interrupt Input
- EZ to use programming software

### Where does it make sense?

This power-packed micro modular PLC is a good fit for small machines that need high end PLC performance like fast scan times or a fair amount of I/O or lots of memory, or simply low cost.

# Where Option Modules DO NOT Cost More than the PLC!



**Profibus Slave Option Card**

**£139**



**£100**



**Ethernet TCP/IP with EZPLC and Modbus Protocol**

**DeviceNet Option Card**

**£79**



**100KHz Counter Module**

**£99**



**250 KHz PWM Module**

**£179**

**Wide Variety of I/O Modules! Mix-n-Match AC/DC, In/Out, Digital/Analog**



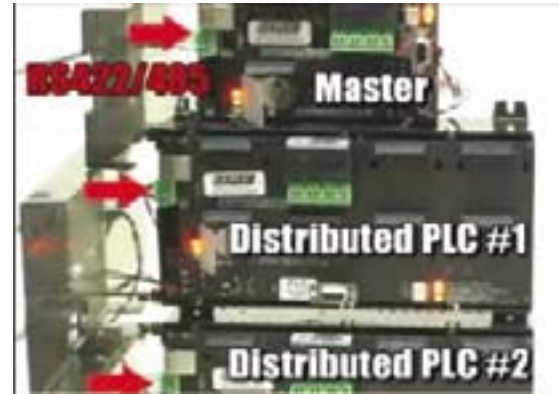
**THAT'S THE WAY TO GO!**

# EZPLC™

## Seven Reasons why EZPLC is the

### 1 8 - 2048 I/O Points with highest Flexibility

When it comes to Micro-Modular PLC's, EZ-PLC is the most flexible in its class. In fact EZPLC takes it one step further to bridge that gap between Micro's and PLC's like AB's SLC and Automation Direct's DL205. With DL06 one needs to specify the base model with fixed I/O type, where as EZPLC uses one base for any kind of I/O whether they are DC, AC, Analog, Relay or any other combination of Inputs/Outputs or AC/DC in one module! All you have to do is to specify a base of PLC as per your maximum I/O need, pick your EZ-I/O to go along with it and you are all set! And when you need more I/O or want to communicate with other EZPLC's. Just use the Modbus Instruction with the RS 422/485 or Ethernet Port.



### 2 Available in 4 Base Models for Size Constraints

EZPLC base is available in 4 models to accommodate 32, 48, 64 and 96 I/O points. Each Module can be used in any slot except some restrictions of I/O types. These are listed in the detailed description of the EZPLC Models. Just choose the right base model based on your maximum I/O requirements.

### 3 Most SENSIBLE I/O Modules starting at £ 22

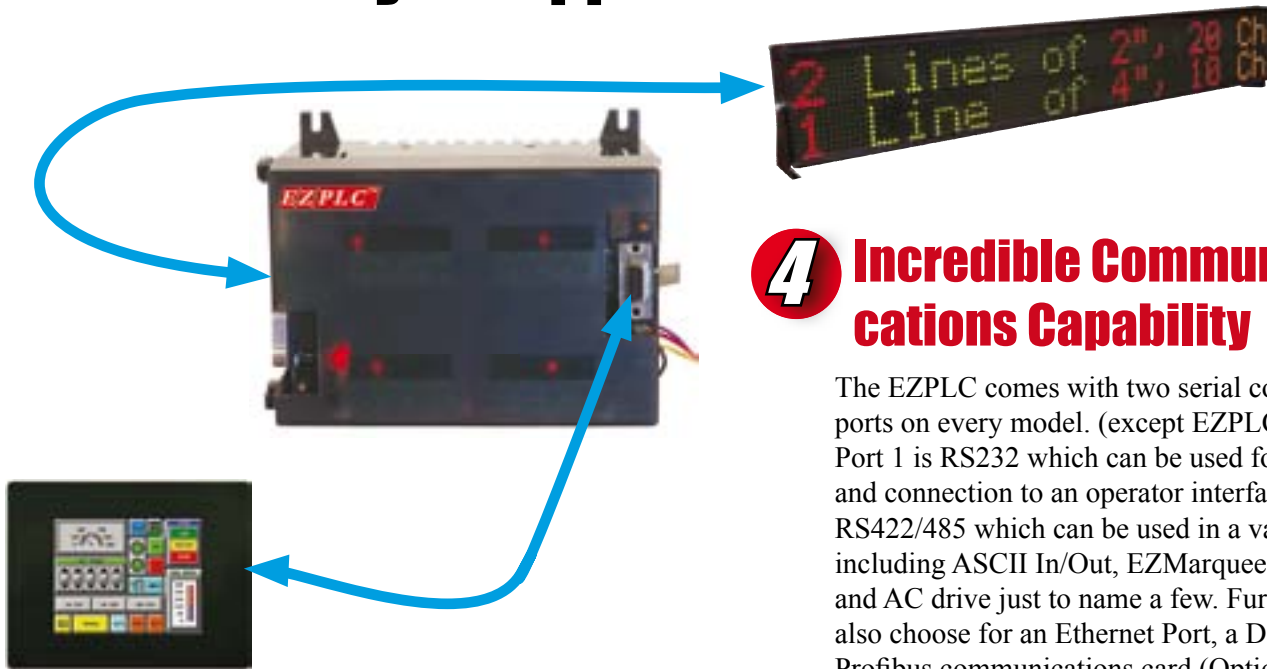
EZPLC offers true versatility when it comes to I/O modules. EZPLC offers Modules with 8 inputs and 8 outputs as well as combination modules with 4 Inputs and 4 Outputs. Analog modules are available as 8AI to combinations like 4AI/4AO. These modules are 12 bit and have 0-5V, 0-10V, 4-20 mA, or 0-20 mA options. Further you can choose for RTD Input Modules, Thermocouple Inputs and High Speed Counter modules.



### 4 Extremely Powerful CPU

- 32 Bit, 40 MHz RISC Processor
- 8192 Total Registers, 8192 variables
- 3 ms Scantime (1K Typical Instructions)  
EZPLCJr = 5 msec.
- Powerful instruction set

# BEST Choice for your Application

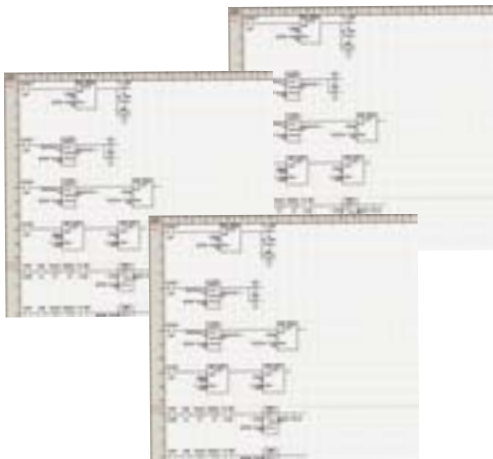


## 4 Incredible Communications Capability

The EZPLC comes with two serial communication ports on every model. (except EZPLC Jr.) Port 1 is RS232 which can be used for programming and connection to an operator interface. Port 2 is RS422/485 which can be used in a variety of ways including ASCII In/Out, EZMarquee connectivity, and AC drive just to name a few. Further you can also choose for an Ethernet Port, a DeviceNet and a Profibus communications card (Optional).

## 6 3 ms Scantime

EZPLC has an unbeatable scan time of 3ms for 1k instructions in its class. When we say 3ms scan time it includes all the overhead along with the scan, which makes it undoubted the fastest PLC in Micro-PLC class! EZPLC uses a super fast 40Mhz Cold-Fire processor with support for Ethernet built-in. The scan time of the EZPLC Jr is 5 ms for 1k.



## 7 SENSIBLE Programming Software at £ 49

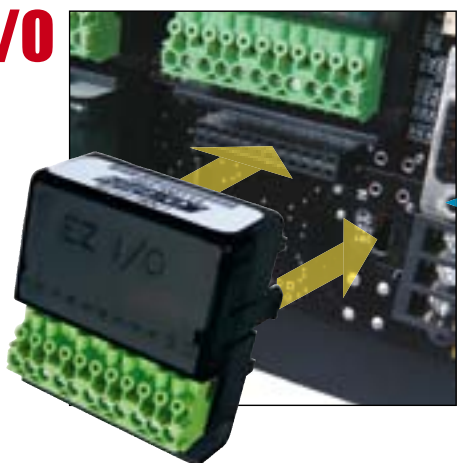
Our EZPLC programming software makes programming your application as EZ as 1-2-3 and affordable at £49. Some of the great features include:

- Windows type folders for quick and easy search
- Free Flow Ladder Logic
- Each Rung Commented
- User friendly dialog boxes like EZTouch programming software
- Powerful data instruction
- Very intuitive programming

# EZPLC™

## We Looked At Every Detail!

### Snap-in I/O Modules

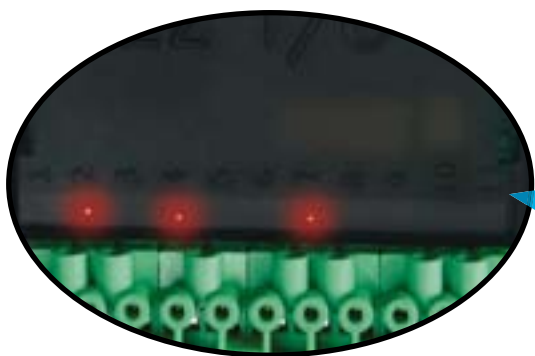


### 4 In/4 Out Wide Variety of Mix-n-Match I/O Modules

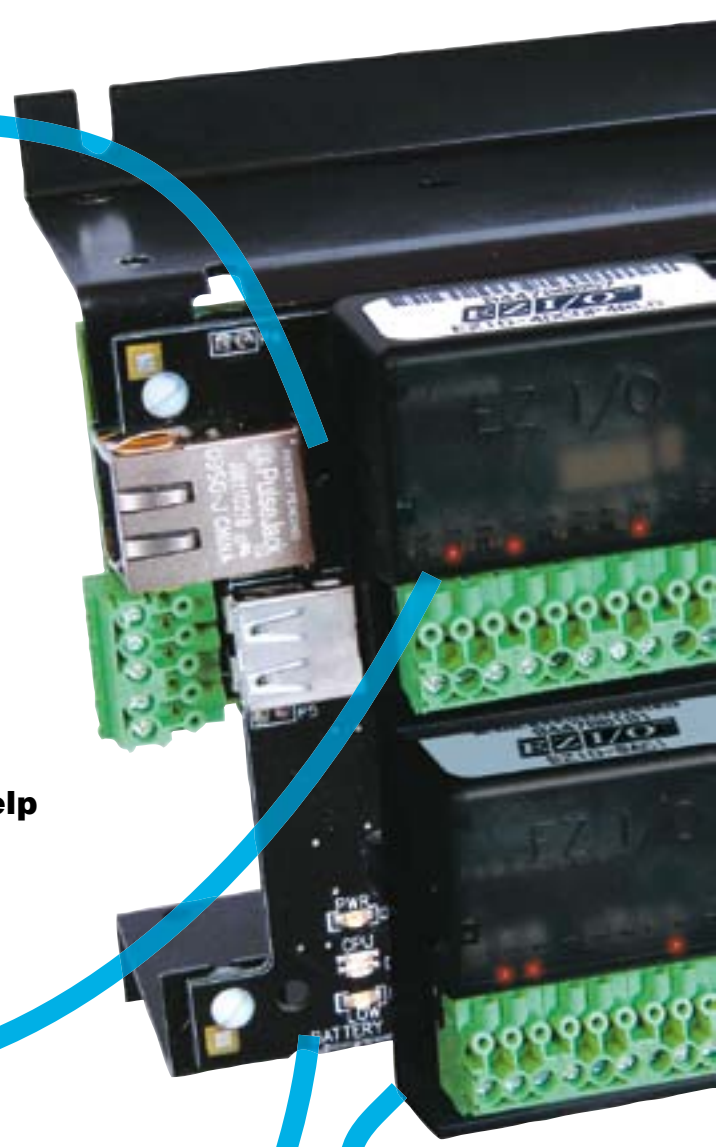
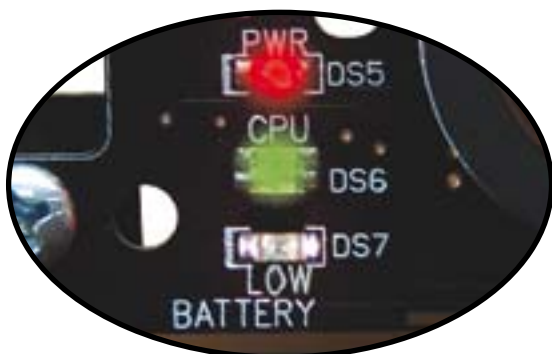
EZPLC offers the widest range of 4 In/4 Out I/O modules. Mix 4 DC In with 4 Relay Out.

### I/O Status LED Indicators

LED Indicator lights on every channel to help troubleshoot and debug field wiring.



### CPU Status Indicator LEDs



### Built-in Wiring Guide

## 24 types of I/O Modules offer maximum Flexibility

EZPLC offer not only discrete I/O, but also Analog I/O, High Speed Counters, RTD and Thermocouple Modules and a PWM Module.



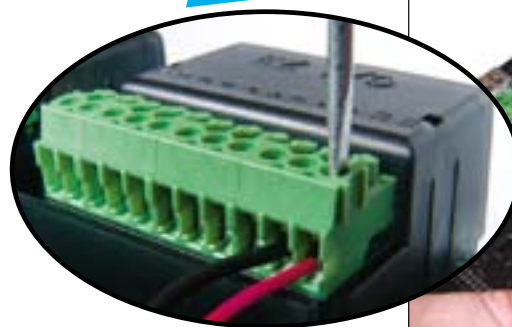
## 0.5 Amp Short Circuit Proof DC Outputs

This 2x2x1" ultra compact module has 8 DC Outputs rated at 0.5 Amp each that are short circuit proof!

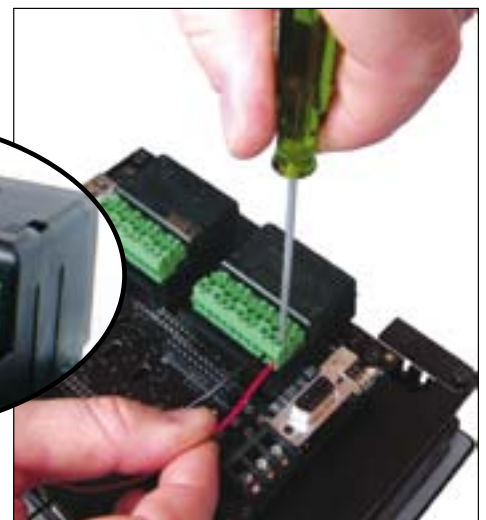
## EZ to Wire Phoenix Plug-in Terminal Blocks

Each module has a field removable screw terminal block.

24 VDC or  
110 VAC  
power input



1 14 AWG, 2 18 AWG, 4 22 AWG  
wires per terminal



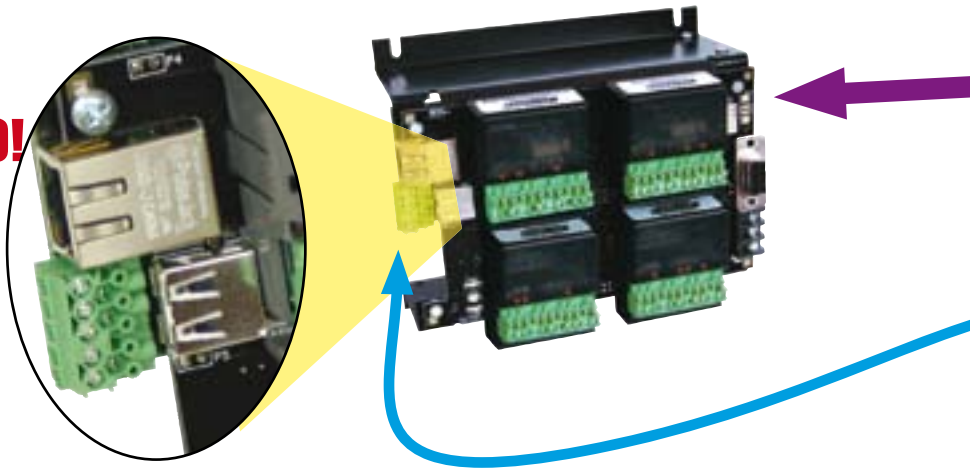


# Communication as Easy as 1-2-3

## Top reasons to choose EZPLC for communication-enabled applications...

### 1 Ethernet TCP/IP Connectivity for £100!

Use EZPLC's enhanced base models for Ethernet connectivity for an unmatched £100. Ethernet port can also be used for programming the EZPLC thus leaving Port 1 and Port 2 free for other communication and networking needs. This offers the most flexible communication setup in Micro-PLC world at the most affordable prices! The Ethernet port has 3 protocols, EZ TCP/IP, Modbus TCP/IP and Ethernet IP.



### 2 Profibus Slave for £139!

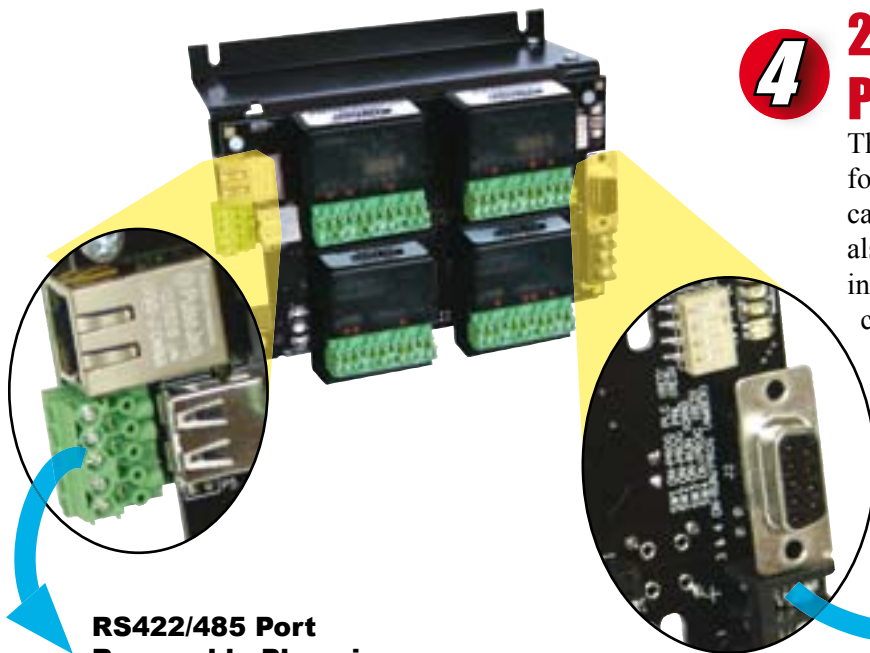
It's affordable than ever to add EZPLC to a Profibus controller network for just £139. Compare that to the price you pay for other PLC's. This add-on option card allows 244 byte of data exchange between Profibus master and EZPLC.

### 3 DeviceNet Slave for £79!

Reduce the hard wiring and add device level diagnostics to your control network with EZPLC's DeviceNet module for a mere £79. This add-on option card allows 256 byte of data exchange between DeviceNet master and EZPLC.

### 4 2 Serial Communication Ports

The EZPLC has two serial communication ports for maximum flexibility. Port 1 is RS232 and can be used for programming of EZPLC and can also be used for communication to an operator interface. Port 2 has the same communication capabilities of many larger PLCs in a serial port which can be used to network AC drives or any other compatible device with multi-drop capability over RS422/485. This Port also supports the Modbus protocol which enables you to exchange Data between PLC's.



**RS422/485 Port Removable Phoenix Terminal Block (except EZPLCJr.)**

**RS232 9 pin sub-D connector**



## 5 Use Programming Port (Port 1) to Connect to Operator Interface

Use Port 1 on EZPLC for programming and once you're done use the same Port 1 to connect to your EZPanel Enhanced and EZText Enhanced operator interfaces. This leaves your Port 2 free for any other communication needs including connection to an external device or networking. EZPLC is also programmable through Ethernet (Enhanced I/O Base).



## 6 Use Port 2 to Connect Directly to ASCII Device(s)

Our EZPLC has built-in ASCII communication capability which allows you to connect to any compatible ASCII device in a seamless manner:

- Port 2 supports ASCII in or out on RS422/485
- Error detection bits on both ASCII in and out transactions
- Data rates from 1200 to 38.4 K
- Simple programming within ladder logic
- Time/date stamps in three formats
- Connect to barcode readers, weigh scales, or embedded controllers



## 7 Connect to EZMarquee on Port 2 or Ethernet

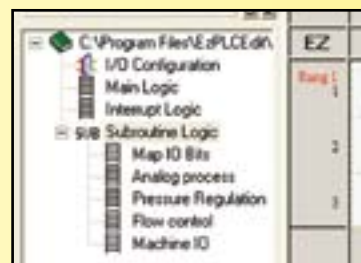
EZPLC's enhanced I/O base comes with a built-in Ethernet TCP/IP which can also be used for programming thus leaving both Port 1 (RS232) and Port 2 (RS422/485) for communication to other devices! EZPLC's enhanced I/O base offers 10Mbit Ethernet link via RJ-45 which can be used to communicate to EZMARQUEE. The Ethernet port can be assigned standard IP address to be used with standard routers and switches.





# You Have Seen Our Incredible Hardware! Our Programming Software is Just as Good, Especially at £49

EZPLC Editor has Windows type Folder organization for Quick EZ Search just like RSLogix and other high end programming software that costs thousands of dollars. The EZPLC Editor has a structured programming software. You do not have to scroll through literally hundreds of rungs to find your I/O mapping, subroutines or interrupts.

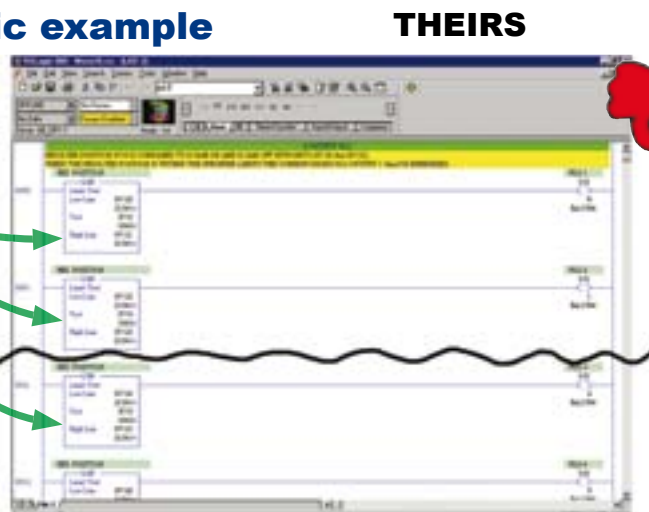


## Unique Patent Pending Free Flow Logic

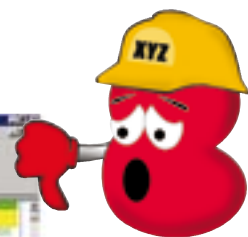
Let's take an 8 PLS output programming and ladder logic example

**12 Rungs and Lots of Wasted Space**

Other editors require you to generate one rung per output instruction requiring you to fill up many pages with ladder logic.



THEIRS



**Just One Rung!**

EZPLC Free Flow Ladder Logic

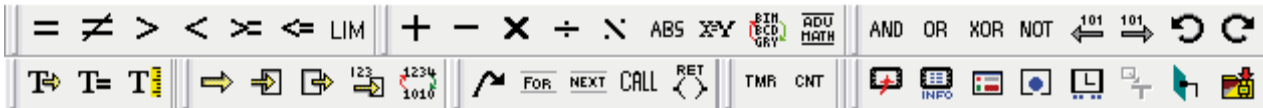
The concept of this patent pending Free Flow Ladder Logic is to create less restricted rungs of logic. This saves the user rung space and valuable scan time. On the right you will see an example of Free Flow Ladder-Logic. As you can see the Free Flow logic allows logic to be placed and connected anywhere in the rung rather than creating a new rung. This allows the user to spend more time on other parts of the machine development and let the CPU do more of the work of solving the logic.





# Powerful Ladder Logic Instructions

**SORRY! We don't have the 229 instructions of DL06 or 225 instructions of D2-260, but our 55 EZPLC instructions are more than adequate, and for some, less confusing, to do the job while saving you major \$\$!**



## Toolbar with Math Instructions

### Advanced Instructions:

#### 32-bit floating point calculations

The EZPLC supports 32-bit floating point mathematical and logical operations. The data options allow you to use signed or unsigned integer data as well as floating point data type.

#### Data Conversion

This instruction is meant to make ladder programming EZ and flexible. You can copy the data in one register, convert its data type and save it into another register without altering the 'source' register. The data can be converted from binary to BCD or grey code or vice versa.

#### Move Block

This instruction adds convenience to handling data inside the ladder program. You can move blocks of memory. All you need to specify is starting point of your source address, number of data elements to move and starting point of destination memory address. Along with Move Block, Fill Block and Move table of Constants also make life of a programmer much simpler.

#### String

These instructions operate on ASCII string data type. You can Move string data between registers, base rung power flow upon string comparison and compute string length to store the length value in a different register.

#### Subroutines

Capability to use subroutines is a huge plus in EZPLC programming. For large and complex programs, user can define many subroutines and use them in the main ladder program. These subroutines can be called from the main logic. Return instruction allows user to return to the main logic at any step.

#### Drum Sequencer

This is a time or event based sequencer that updates up to 16 outputs per step, up to 16 steps. Time base of each count is user defined and each step has its own counter. User can define an event to trigger the count. The rung power flow is allowed after completion of all the steps in a drum.

#### Marquee Instructions

Now you don't have to spend days to send signals to your marquee. Send to marquee instruction allows you to communicate to the marquee via ASCII strings. A unique message number is assigned to each message in the message database. This instruction looks up the message number, corresponding to the intended message to be displayed and sends it to the marquee. User can define actions if a message number cannot be found in the database.

#### Interrupt Routine

This is how your EZPLC would process external events that require "instantaneous" response. User can write a separate interrupt logic routine. At the instance of an external event, the PLC would interrupt the main logic, execute this interrupt logic on a priority, and scan corresponding I/O. It would return to the main logic automatically after processing the interrupt routine.

#### ASCII Instructions

User can send/receive ASCII string data to/from any register in PLC to a predefined serial port. User can also define the Control address and character count of the source register. Similarly, user can send ASCII string data to a Marquee directly from the main logic.

#### Bit Move Instructions

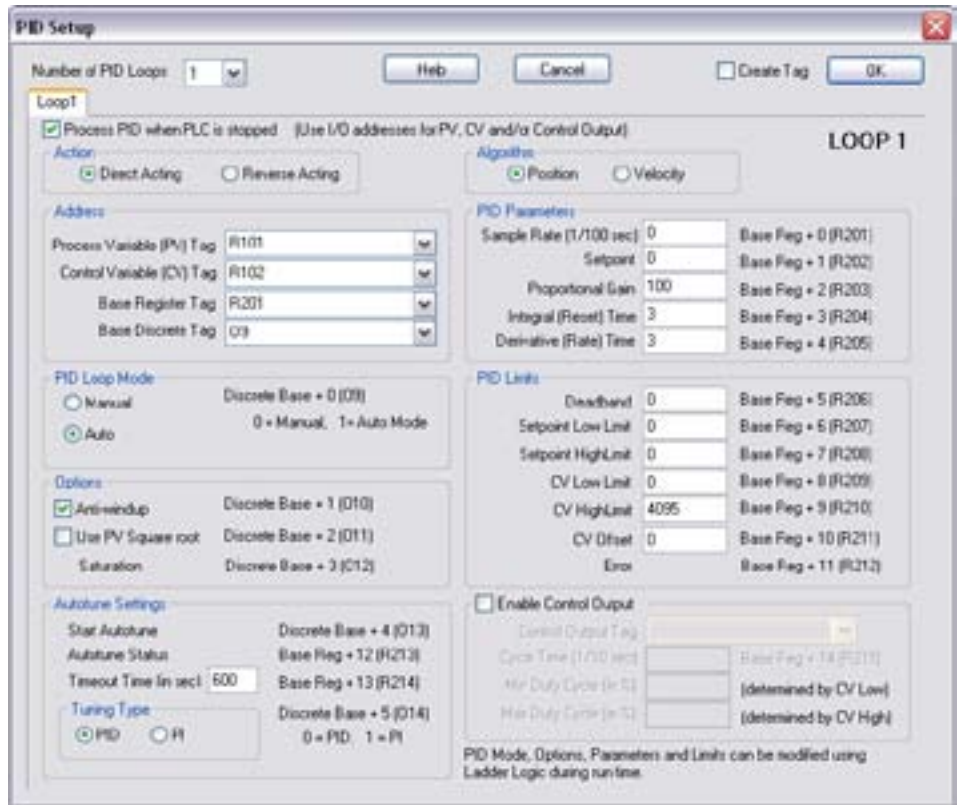
Bit move instructions allow the user to move word data from a register type memory address to a bit in a discrete memory location and backward.





# 8 PID Loops with Monitor Function

PID is one of the most popular control algorithms used in the industry, to control the variables involved in an industrial manufacturing process, for the proper operation of the process. With a proper choice of P, I, and D settings, a user can maintain a process value very close to the setpoint. In addition, if the setpoint changes, the PID algorithm can quickly bring the process back under control. EZSeries PLC supports up to 8 PID loops. For each loop you have to define several parameters, as shown in the PID Setup window. You may change most of these parameters during run time, using EZPLC editor in online mode. You can use the PID Monitor function to monitor and make real-time changes to your PID Loop. When you select this function a PID Monitor window will show up. A graph will begin to appear and display the Setpoint, the Process Variable and the Control Variable.



## User Program with Password Protection



EZ Automation introduces password protection on its PLCs for the project / Application developed by an OEM or an SI.

***In order to even view the program, the protected project password is required to be entered.***

With this feature the application writer can protect his/her investment of intellectual property not to be copied by third parties.

This feature is also available in the EZ Series Touch panels whereby the user is required to enter a password to upload the application program to a PC.

The above feature for PLC IP protection is also available in EZSeries Text-PLC and EZSeries TouchPLC.

## Mobile Storage Module

The EZIO-PRGM module allows a user to back up PLC program. OEMs and System Integrators can use the module to distribute PLC program updates to their customers. End-user plants can change the PLC program without needing a PC and programming software. To back up a PLC program, user places the module in any of the slots in the PLC. Using EZSeries PLC programming software, the user then downloads the program to be backed up to the PLC and issues backup command. Once the modules are programmed with the user-program, they can be taken out after turning the power off. To restore the user program, a user needs to plug-in the backup module in any of the I/O slots of the plc base. On power-up, the plc will detect the backup module, and restore the user program. If the backup module does not have a valid program, the program is not restored.



# Switch Settings, Status Indicators and Connections

## PLC Run/Program Set up

SW3	SW4	Tri-Color LED	Operation
1	0	Green	Run
0	1	Red	Program
1	1	Amber	Run/Program
0	0	Off	No Operation

Open = OFF = 0  
Closed = ON = 1

## RS232 Programming Port Enable Switch Set up

SW1	PLC LED	RUN LED	Connection
1	On	Off	RS232 port to PLC
0	Off	On	RS232 port disconnected (Set SW2 to 0 and this port will get disconnected when SW1 is 0)

**Optional Ethernet connectivity on Enhanced model**

### RS422/485 ASCII Port

Used to send ASCII instructions to other devices

SD-  
SD+  
RD+  
RD-

### Port for I/O Module

### RS232 Programming Port

Used to program PLC or TextPanel

Pin #	Function
2	TXD
3	RXD
5	Logic GND
Rest	NC

### 24 VDC Power Input

### 3V Battery Included

Power LED  
CPU LED  
Low Battery LED

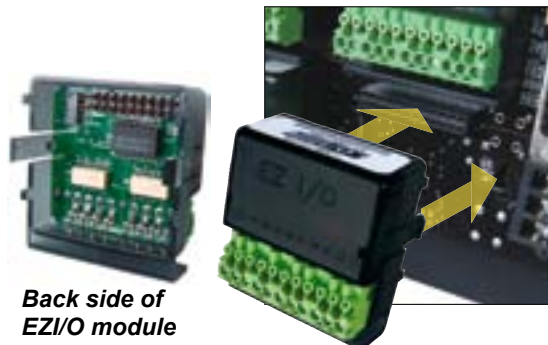
### Insert I/O Modules

Snapped into the two slots

### Remove I/O Modules

Removed from the slots by pressing the two clips on the side of the module.

### DeviceNet, Profibus Optional Port



Back side of EZ I/O module



**Caution:** Do not use AC output module in the bottom left slot due to height of the battery. Analog IN/OUT module can be used only on the first 4 slots. Other analog modules or High Speed counter module can be used only in the first ten slots.

# EZ I/O™

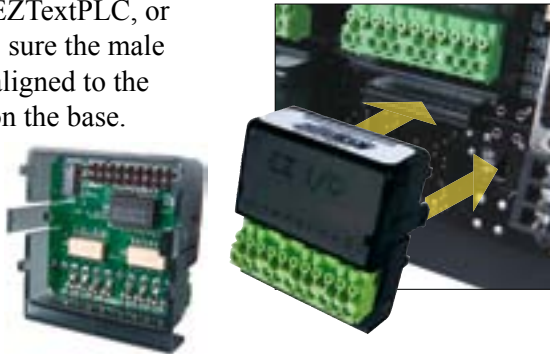
## EZ I/O Module Installation and Wiring

### Inserting and Removing I/O Modules

#### Insert I/O Modules

EZ I/O modules have two clips and a molex connector which snap into EZTouchPLC, EZTextPLC, or EZPLC bases. Make sure the male molex connector is aligned to the female counterpart on the base.

Back side of EZ I/O module



#### Remove I/O Modules

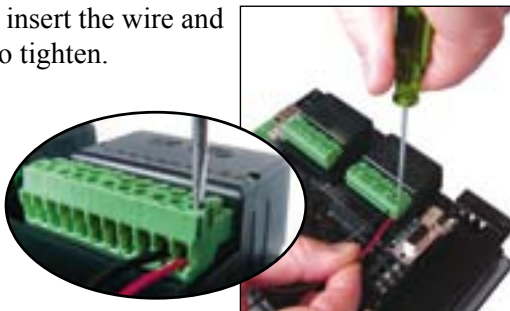
Removed from the slots by pressing the two clips inward on the sides of the module to release the clips from the base. You may need to use your thumb to apply enough force.



### Removable Terminal Block and EZ Wiring

#### Wiring EZ I/O Modules

Simply insert the wire and screw to tighten.



#### Wiring Duct

EZ I/O modules are equipped with wiring trays for proper routing of wires.



#### Removing Terminal Blocks

As EZ I/O was built to withstand industrial environments, terminal blocks have a very snug fit on the module. Slip the edge of the screwdriver under the terminal block and lift to pop off.

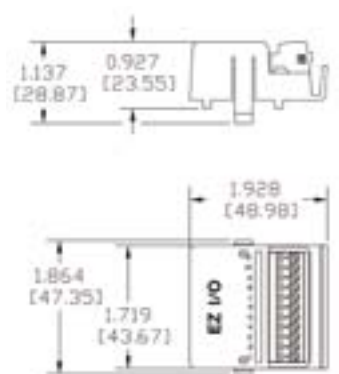


#### Inserting Terminal Blocks

Eliminate rewiring your terminal block anytime you need to swap out a module.



#### EZ I/O Dimensions



Number of Wires Allowed in Each Terminal	
1	14 AWG
2	18 AWG
4	22 AWG

#### Wiring Capabilities






UL rated at 300 volts, 10 amps  
14 AWG

#### Screwdriver Required

EZ I/O terminal blocks require a 2.5mm blade screwdriver. You can purchase these screwdrivers from us at a price of £5.00 under part # EZIO-SCDRV for a pack of two.

# EZPLC Selection Guide and Specifications

## EZSeries PLC Model Specifications

Part Number	Snap-in I/O Module base EZPLCJ-D-32 - £ 69	Snap-in I/O Module base EZPLC-D-32 - Standard £122 EZPLC-D-32E - Ethernet £222	Snap-in I/O Module base EZPLC-D-48 - Standard £165 EZPLC-D-48E - Ethernet £265	Snap-in I/O Module base EZPLC-D-64 - Standard £187 EZPLC-D-64E - Ethernet £287	Snap-in I/O Module base EZPLC-D-96 - Standard £219 EZPLC-D-96E - Ethernet £319
					
<b>Specifications</b>	EZPLC models with "E" suffix are built with 10/100 Base-T Ethernet with a standard RJ45 connector				
	4 Slot EZPLC Jr. DC Power	4 Slot EZPLC DC Power	6 Slot EZPLC DC Power	8 Slot EZPLC DC Power	12 Slot EZPLC DC Power
<b>Input Voltage Range</b>	24VDC (20-28VDC)	24VDC (20-28VDC)	24VDC (20-28VDC)	24VDC (20-28VDC)	24VDC (20-28VDC)
<b>Maximum I/O Capacity</b>	4 Slot Base (32/I/O Max)	4 Slot Base (32/I/O Max)	6 Slot Base (48/I/O Max)	8 Slot Base (64/I/O Max)	12 Slot Base (96/I/O Max)
<b>Power Supply Capacity</b>	3.3V @ 1 Amp				
<b>CPU &amp; Support Electronics Power</b>	300mA				
<b>I/O Module Power</b>	25mA				
<b>DeviceNet/ Profibus Interface Power</b>	NA	DeviceNet 50mA, Profibus 100mA			
<b>Maximum Power Consumption</b>	10 watts	10 watts	11 watts	12 watts	15 watts
<b>CPU Processor</b>	32 Bit, 40 MHz RISC Processor				
<b>Total Memory</b>	64 KB (Ladder)				
<b>Total # of Registers</b>	8192 16Bit				
<b>Typical Scan Time</b>	5ms (1K Boolean)	3ms (1K Boolean)			
<b>Real Time Clock/Calendar</b>	NA	Built-in			
<b>Battery Backup</b>	NA	Yes, Lithium coin cell battery with 5 year life expectancy, with a low battery indicator			
<b>LED Indicators</b>	Input Power, CPU Status (Run, Program & Run/Program) , Low Battery and RS232 Programming Port active indicators				
<b>I/O Supported</b>	EZ I/O Snap-in modules with status LEDs and Removable Terminal Block DC / AC / Analog / Relay / Thermocouple / High Speed Counter / DeviceNet / Profibus				
<b>Operating Temperature</b>	-10C to 60C				
<b>Storage Temp.</b>	-20C to 70C				
<b>Humidity</b>	10-95% Non-Condensing				
<b>Electrical Noise</b>	Nema ICS 2-230 Showering arc; ANSI C37.90a SWC; Level C Chattering Relay Test (pending)				
<b>Agency Approval</b>	UL, CUL, CE (pending)				
<b>Withstand Voltage</b>	1000VDC (1 minute) between power supply input terminal and protective ground)				
<b>Insulation Resistance</b>	Over 20M Ohm between power supply input and terminal and protective ground				
<b>Vibration</b>	5 to 55Hz 2G's for 2 hours in X,Y,and Z axis				
<b>Shock</b>	10G for under 12ms in the X,Y, and Z axis				
<b>Protocols Supported</b>	EZ Protocol on RS232	ASCII In/Out on RS422/485 port; EZ Protocol on Ethernet and RS232 port DeviceNet Slave option card (EZPLC-DeviceNet), and Profibus Slave option card (EZPLC-Profibus)			
<b>Communication Ports</b>	RS232	Standard Model: Port 1: RS232 (Programming and HMI Port Only with EZ Protocol) Port 2: RS422 (1.2K, 2.4K, 4.8K, 9.6K, 19.2K, and 38.4K Baud Rates supported) ASCII In/Out			
	NA	Ethernet Model: Port 1: RS232 (Programming and HMI Port Only with EZ Protocol) Port 2: RS422 (1.2K, 2.4K, 4.8K, 9.6K, 19.2K, and 38.4K Baud Rates supported) ASCII In/Out Port 3: Ethernet TCP/IP with EZ Protocol for programming or interface to an HMI			
<b>External Dimensions</b>	5.75" x 4.868" x 3.124" (146.05 x 123.65 x 79.356mm)	5.75" x 4.868" x 3.124" (146.05 x 123.65 x 79.356mm)	8.35" x 4.868" x 3.124" (212.09 x 123.65 x 79.356mm)	9.21" x 5.818" x 3.124" (233.93 x 147.78 x 79.356mm)	14.908" x 5.173" x 3.124" (378.65 x 131.4 x 79.356mm)



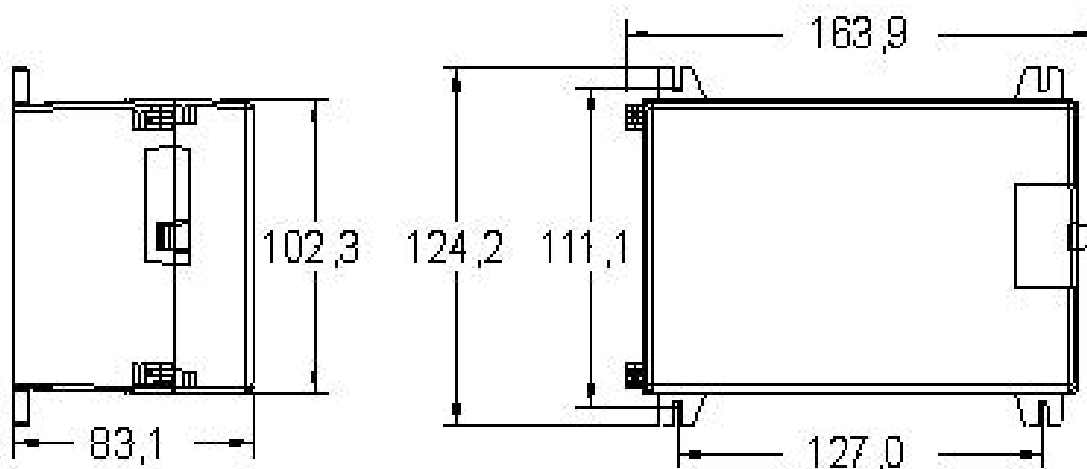
# EZPLCJr-D-32 Specifications



### MODULES NOT INCLUDED WITH BASE

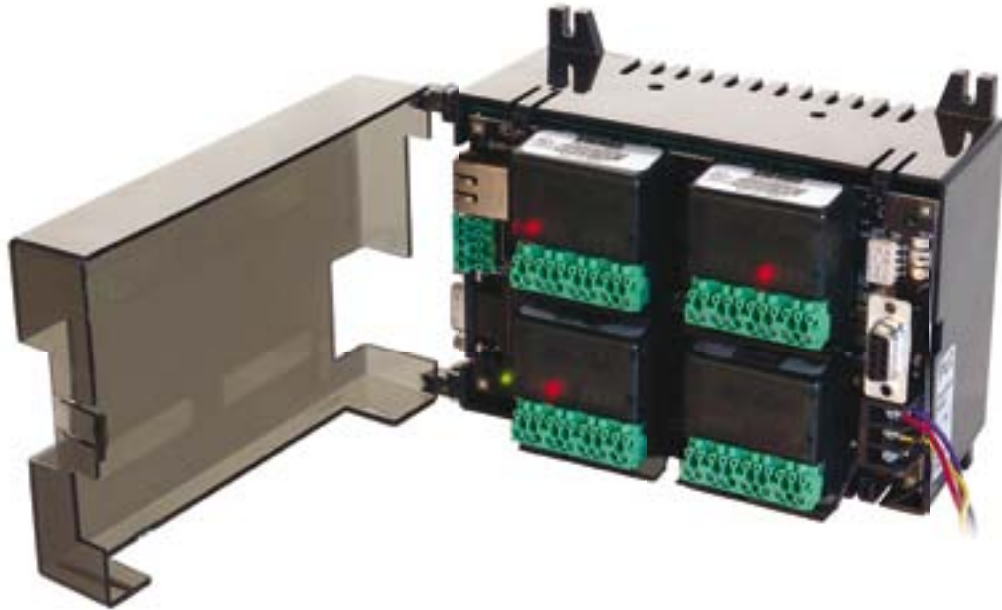
Model Number	Interface	Price
<i>EZPLCJr-D-32</i>	DC Power – 32 I/O Base comes with RS232 port 1, no RS422/485 port 2 and no connector for plugging in DeviceNet or Profibus option cards	£69
<i>EZPLC-EDIT</i>	Programming Software	£49
<i>EZ-PGMCBL</i>	Programming Cable 3 meter	£20

*No limitation on I/O module location.*



all Dimensions in mm

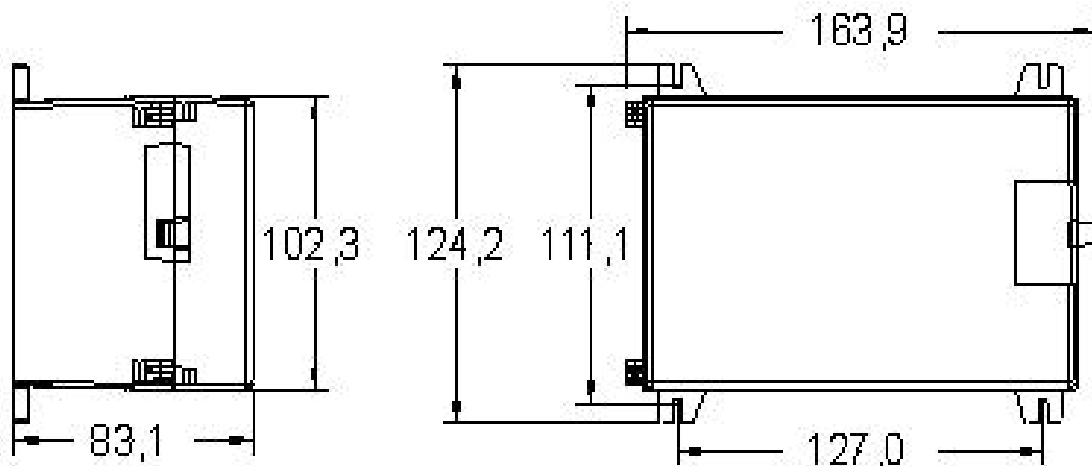
## EZPLC-D-32 Specifications



### MODULES NOT INCLUDED WITH BASE

Model Number	Interface	Price
<b>EZPLC-D-32</b>	DC Power – 32 I/O Base comes with RS232 port 1 and RS422/485 port 2, and a Male connector for plugging in DeviceNet or Profibus option cards	£122
<b>EZPLC-D-32E</b>	DC Power – 32 I/O Enhanced Ethernet Base comes with RS232 port 1, RS422/485 port 2, Ethernet port 3 and a Male connector for plugging in DeviceNet or Profibus option cards	£222
<b>EZPLC-DEVICENET</b>	DeviceNet Interface Card	£79
<b>EZPLC-PROFIBUS</b>	Profibus Interface Card	£139
<b>EZPLC-EDIT</b>	Programming Software	£49
<b>EZ-PGMCBL</b>	Programming Cable 3 meter	£20

**No limitation on I/O module location except:  
Bottom left module can only be DC I/O module**



all Dimensions in mm



# EZPLC-D-48 Specifications

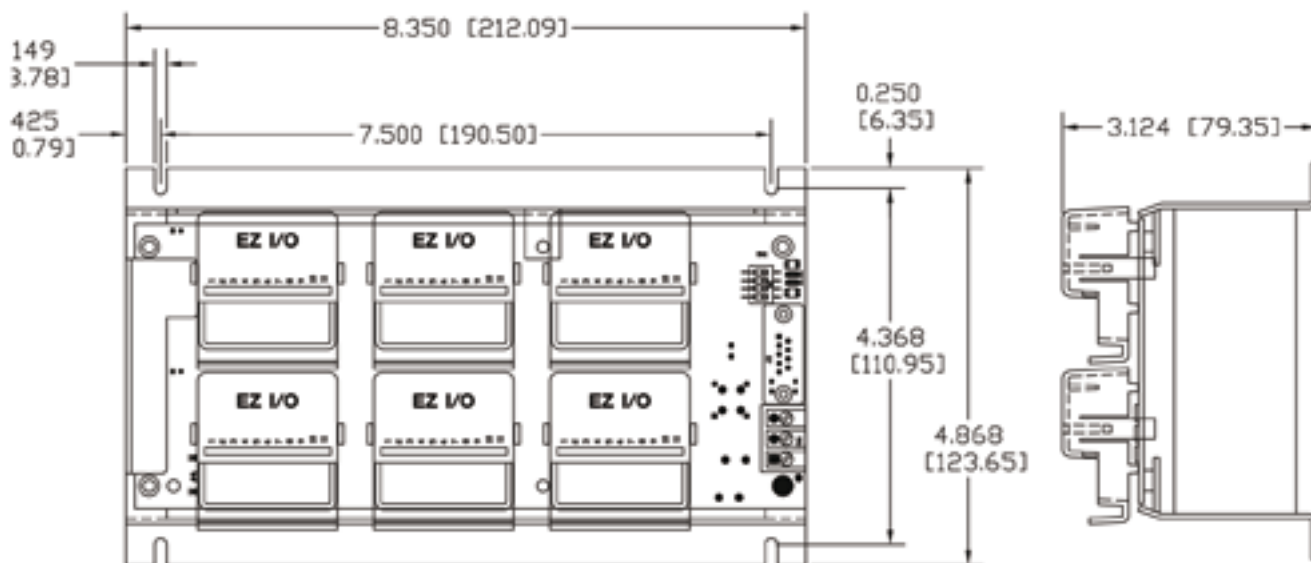


### MODULES NOT INCLUDED WITH BASE

Model Number	Interface	Price
<b>EZPLC-D-48</b>	DC Power – 48 I/O Base comes with RS232 port 1 and RS422/485 port 2, and a Male connector for plugging in DeviceNet or Profibus option cards	£165
<b>EZPLC-D-48E</b>	DC Power – 48 I/O Enhanced Ethernet Base comes with RS232 port 1, RS422/485 port 2, Ethernet port 3 and a Male connector for plugging in DeviceNet or Profibus option cards	£265
<b>EZPLC-DEVICENET</b>	DeviceNet Interface Card	£79
<b>EZPLC-PROFIBUS</b>	Profibus Interface Card	£139
<b>EZPLC-EDIT</b>	Programming Software	£49
<b>EZ-PGMCBL</b>	Programming Cable 3 meter	£20

No limitation on I/O module location except:

- 1) Bottom left module can only be DC I/O module
- 2) Analog input and output combination module can be configured only in the first 4 slots and cannot be mounted on the bottom left position



all Dimensions in mm

# EZPLC-D-64 Specifications



## MODULES NOT INCLUDED WITH BASE

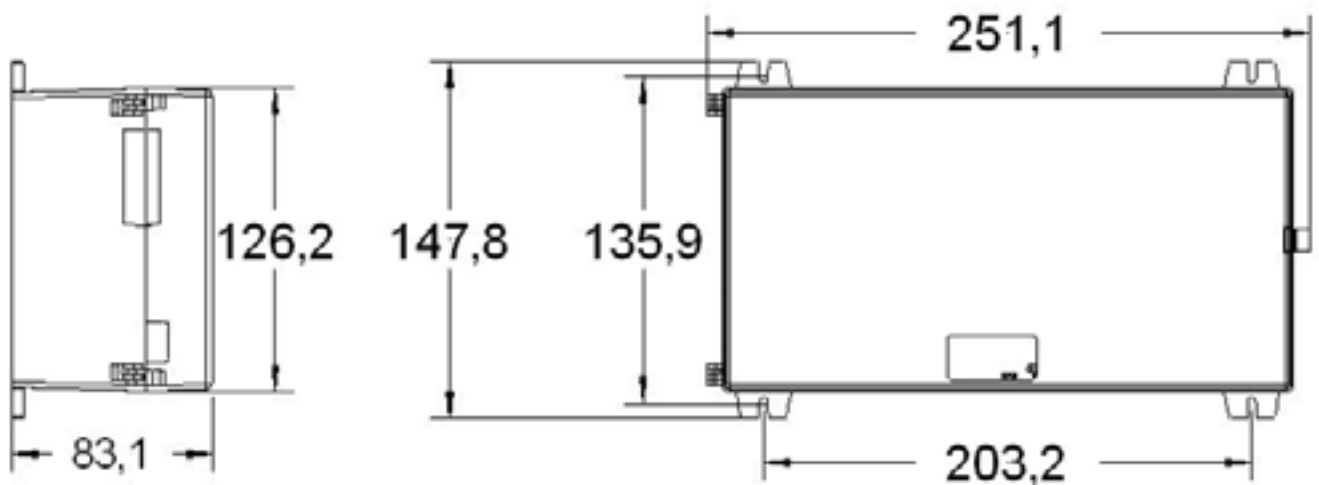
Model Number	Interface	Price
<b>EZPLC-D-64</b>	DC Power – 64 I/O Base comes with RS232 port 1 and RS422/485 port 2, and a Male connector for plugging in DeviceNet or Profibus option cards	£187
<b>EZPLC-D-64E</b>	DC Power – 64 I/O Enhanced Ethernet Base comes with RS232 port 1, RS422/485 port 2, Ethernet port 3 and a Male connector for plugging in DeviceNet or Profibus option cards	£287
<b>EZPLC-DEVICENET</b>	DeviceNet Interface Card	£79
<b>EZPLC-PROFIBUS</b>	Profibus Interface Card	£139
<b>EZPLC-EDIT</b>	Programming Software	£49
<b>EZ-PGMCBL</b>	Programming Cable 3 meter	£20

*No limitation on I/O module location except:*

**1) Bottom left module can only be DC I/O module**

**2) Analog input and output combination module can be configured**

**only in the first 4 slots and cannot be mounted on the bottom left position**



all Dimensions in mm



# EZPLC-D-96 Specifications

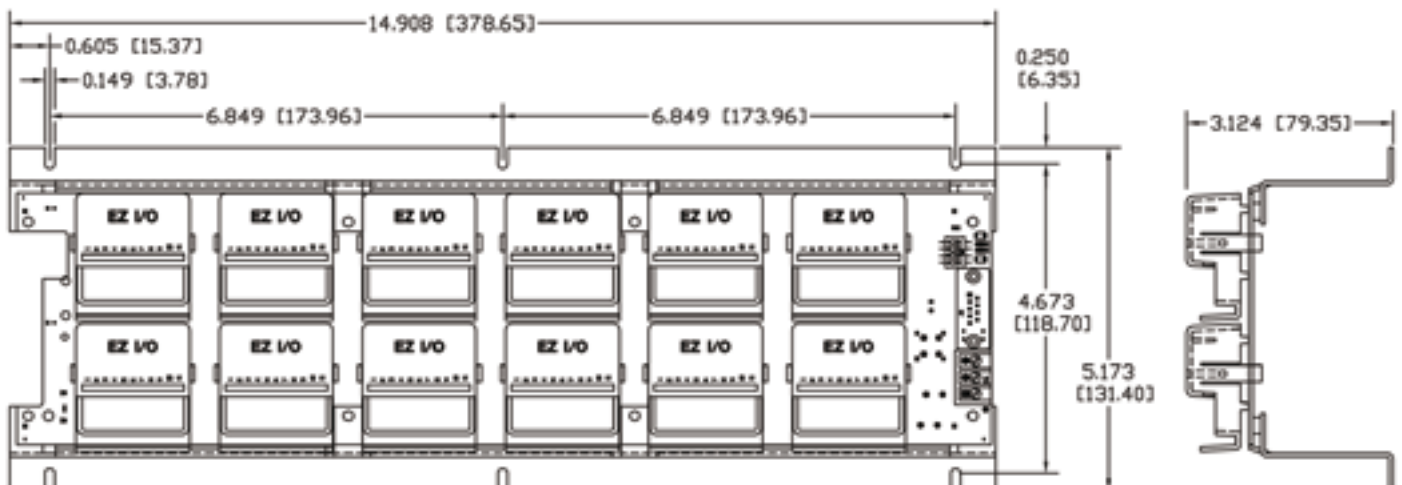


### MODULES NOT INCLUDED WITH BASE

Model Number	Interface	Price
<b>EZPLC-D-96</b>	DC Power – 96 I/O Base comes with RS232 port 1 and RS422/485 port 2, and a Male connector for plugging in DeviceNet or Profibus option cards	£219
<b>EZPLC-D-96E</b>	DC Power – 96 I/O Enhanced Ethernet Base comes with RS232 port 1, RS422/485 port 2, Ethernet port 3 and a Male connector for plugging in DeviceNet or Profibus option cards	£319
<b>EZPLC-DEVICENET</b>	DeviceNet Interface Card	£79
<b>EZPLC-PROFIBUS</b>	Profibus Interface Card	£139
<b>EZPLC-EDIT</b>	Programming Software	£49
<b>EZ-PGMCBL</b>	Programming Cable 3 meter	£20

No limitation on I/O module location except:

- 1) Bottom left module can only be DC I/O module
- 2) Analog input and output combination module can be configured only in the first 4 slots and cannot be mounted on the bottom left position
- 3) Analog I/O modules can be configured only in the first 10 slots



all Dimensions in mm

# EZ I/O™

Module Specifications	
Number of Inputs	8 (sink/source)
Input Voltage Range	10-28 VDC
Peak Voltage	40 VDC
Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
Maximum Input Current	5 mA @ 28 VDC
Input Impedance	5.6k @ 10-28 VDC
ON Voltage Level	> 10 VDC
OFF Voltage Level	< 2 VDC
Min. ON Current	1.5 mA
Min. OFF Current	0.2 mA
OFF to ON Response	2-4 ms, typical 3 ms
ON to OFF Response	2-4 ms, typical 3 ms
Status Indicators	Red LED for each input
Commons	2 points
Fuse	No Fuse
Base Power Required (3.3V)	Typical 15mA (all inputs on)
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

## 8 pt. 24VDC Input Module

EZIO-8DCI



EZIO-8DCI

£22

Module Specifications	
Number of Inputs	8 (sink/source)
Input Voltage Range	10-28 VDC
Peak Voltage	40 VDC
Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
Maximum Input Current	5 mA @ 28 VDC
Input Impedance	5.6k @ 10-28 VDC
ON Voltage Level	> 10 VDC
OFF Voltage Level	< 2 VDC
Min. ON Current	1.5 mA
Min. OFF Current	0.2 mA
OFF to ON Response	0.2-0.4 ms, typical 0.3 ms
ON to OFF Response	0.2-0.4 ms, typical 0.3 ms
Status Indicators	Red LED for each input
Commons	2 points
Fuse	No Fuse
Base Power Required (3.3V)	Typical 15 mA (all inputs on)
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

## High Speed Input Module 8 Inputs ~ 24 VDC



EZIO-8HSDCI

£27

EZIO-8HSDCI



Module Specifications	
Number of Outputs	8 sourcing
Peak Voltage	50.0 VDC
Maximum Steady State Output Current	0.5A per output, 1.0A max per module @ 50°C
Maximum Leakage Current	100µA @ 50 VDC @ 50°C
ON Voltage Drop	2 VDC @ 0.5A
Maximum Inrush Current	0.8A for 10ms
OFF to ON Response	< 2µs
ON to OFF Response	<10µs
Status Indicators	Red LED for each output
+V Terminals & Commons	One V*, 2 Common
Short Circuit Protection	1 Amp per module, turns off outputs upon short circuit detection
Base Power Required (3.3V)	40mA, all outputs on
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

## 8 pt. 24 VDC Output Module PNP (Source)



Module Specifications	
Number of Outputs	8 sinking
Peak Voltage	50.0 VDC
Maximum Steady State Output Current	0.5A per output, 1.4A max per module @ 50°C
Maximum Leakage Current	100µA @ 50 VDC @ 50°C
ON Voltage Drop	1.3 VDC @ 0.5A
Maximum Inrush Current	1.0A for 10ms
OFF to ON Response	< 2µs
ON to OFF Response	<10µs
Status Indicators	Red LED for each output
+V Terminals & Commons	One V*, 2 Common
Short Circuit Protection	1.4 Amp per module, turns off outputs upon short circuit detection
Base Power Required (3.3V)	40mA, all outputs on
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

## 8 pt. 24 VDC Output Module NPN (Sink)






## 4 pt. 24 VDC In / 4 pt. 24 VDC Out (NPN) Module

## 4 pt. 24 VDC In / 4 pt 24 VDC Out (PNP) Module

Module Specifications		
DC Input Specs	Number of Inputs	4 (sink/source)
	Input Voltage Range	10-28 VDC
	Peak Voltage	40 VDC
	Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
	Maximum Input Current	5 mA @ 28 VDC
	Input Impedance	5.6k @ 10-28 VDC
	ON Voltage Level	> 10 VDC
	OFF Voltage Level	< 2 VDC
	Min. ON Current	1.5 mA
	Min. OFF Current	0.2 mA
	OFF to ON Response	2-4 ms, typical 3 ms
	ON to OFF Response	2-4 ms, typical 3 ms
	Status Indicators	Red LED for each input
	Commons	1 point
	Fuse	No Fuse
	Base Power Required 3.3 V	Typical 8 mA
Optical Isolation	2500 Volt	
DC Output Specs	Number of Outputs	4 sinking
	Peak Voltage	50.0 VDC
	Maximum Steady State Output Current	0.5A per output, 1.4A max per module @ 50°C
	Maximum Leakage Current	100µA @ 50 VDC @ 50°C
	ON Voltage Drop	1.5 VDC @ 0.5A
	Maximum Inrush Current	1.0A for 10ms
	OFF to ON Response	< 2µs
	ON to OFF Response	<10µs
	Status Indicators	Red LED for each output
	+V Terminals & Commons	One V+, 1 Common
	Short Circuit Protection	1.4 Amp per module, turns off outputs upon short circuit detection
	Base Power Required 3.3V	20mA, all outputs on
	Optical Isolation	2500 Volt

Module Specifications		
DC Input Specs	Number of Inputs	4 (sink/source)
	Input Voltage Range	10-28 VDC
	Peak Voltage	40 VDC
	Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
	Maximum Input Current	5 mA @ 28 VDC
	Input Impedance	5.6k @ 10-28 VDC
	ON Voltage Level	> 10 VDC
	OFF Voltage Level	< 2 VDC
	Min. ON Current	1.5 mA
	Min. OFF Current	0.2 mA
	OFF to ON Response	2-4 ms, typical 3 ms
	ON to OFF Response	2-4 ms, typical 3 ms
	Status Indicators	Red LED for each input
	Commons	1 point
	Fuse	No Fuse
	Base Power Required (3.3V)	Typical 7.5 mA (all inputs on)
Optical Isolation	2500 Volt	
DC Output Specs	Number of Outputs	4 (sourcing)
	Peak Voltage	50.0 VDC
	Maximum Steady State Output Current	0.5A per output, 1.0A max per module @ 50°C
	Maximum Leakage Current	100µA @ 50 VDC @ 50°C
	ON Voltage Drop	2 VDC @ 0.5A
	Maximum Inrush Current	0.8A for 10ms
	OFF to ON Response	< 2µs
	ON to OFF Response	<10µs
	Status Indicators	Red LED for each output
	+V Terminals & Commons	One V+, 1 Common
	Short Circuit Protection	1 Amp per module, turns off outputs upon short circuit detection
	Base Power Required (3.3V)	20mA, all outputs on
	Optical Isolation	2500 Volt



# 4 pt. Relay Output Module

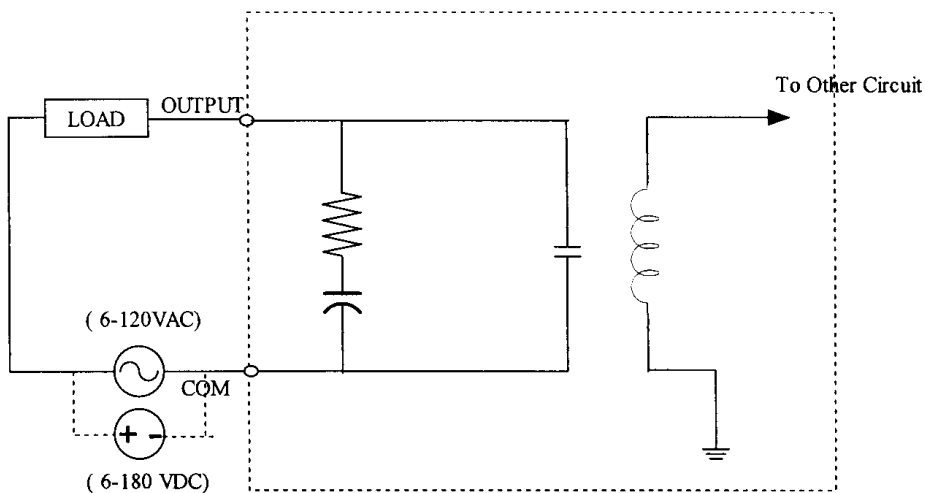
Module Specifications	
Number of Outputs	4
Output Voltage Range	5-180 VDC or 20-132 VAC
Output Type	Relay 1 Form A (SPST)
Output Terminals Consumed	8
Peak Voltage	180 VDC/200 VAC
AC Frequency	47-63 Hz
Maximum Current (resist.)	1A/point
Maximum Leakage Current	0.5mA @ 130 VAC @ 60Hz
Maximum Switching Current	0.5A
Electromagnetic Shield	2 pF between contact and shield
Dielectric Strength	250V between contacts, 1500V between contacts and shield
OFF to ON Response	≤1ms (typical)
ON to OFF Response	≤1ms (typical)
Status Indicators	Red LEDs
Contacts	4 isolated
Base Power Required (3.3V)	50mA



**EZIO-4RLO**

**EZIO-4RLO**  
**£39**

Pinout Information	
Pin No.	EZIO-4RLO
1	Output(1)_Normally open
2	Output(1)_COM
3	Output(2)_Normally open
4	Output(2)_COM
5	Not Connected
6	Not Connected
7	Output(3)_Normally open
8	Output(3)_COM
9	Not Connected
10	Output(4)_Normally open
11	Output(4)_COM



# EZ I/O™

## 4 pt. 24 VDC In / 4 pt. Relay Out Module

Module Specifications			
DC Input Specs	Number of Inputs	4 (sink/source)	
	Input Voltage Range	10-28 VDC	
	Peak Voltage	40 VDC	
	Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC	
	Maximum Input Current	5 mA @ 28 VDC	
	Input Impedance	5.6k @ 10-28 VDC	
	ON Voltage Level	> 10 VDC	
	OFF Voltage Level	< 2 VDC	
	Min. ON Current	1.5 mA	
	Min. OFF Current	0.2 mA	
	OFF to ON Response	2-4 ms, typical 3 ms	
	ON to OFF Response	2-4 ms, typical 3 ms	
	Status Indicators	Red LED for each output	
	Commons	2 points	
	Fuse	No Fuse	
	Relay Output Specs	Base Power Required (3.3V)	Typical 7.5mA (all inputs on)
		Optical Isolation	2500 Volt
Wires		1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG	
Number of Outputs		4	
Output Voltage Range		5-180 VDC or 20-132 VAC	
Output Type		Relay 1 Form A (SPST)	
Output Terminals Consumed		5	
Peak Voltage		180 VDC/200 VAC	
AC Frequency		47-63 Hz	
Maximum Current (resist.)		1A/point	
Maximum Leakage Current		0.5mA @ 130 VAC @ 60Hz	
ON Voltage Drop		1.5 V @ 1 Amp	
Maximum Switching Current		0.5A	
Electromagnetic Shield		2 pF between contact and shield	
Dielectric Strength	250V between contacts, 1500V between contacts and shield		
OFF to ON Response	≤1ms (typical)		
ON to OFF Response	≤1ms (typical)		
Status Indicators	Red LEDs		
Commons	1		
Base Power Required (3.3V)	25mA		



Pinout Information	
Pin No.	EZIO-4DCIP4RLO
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	Customer_COM (GND)
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	Customer_COM (GND)
11	Not Connected



Module Specifications	
Number of Channels	8 single ended
Input Range	0-5, 0-10V DIP switch selectable
Resolution	12 bit (1 - 4096)
Step Response	200µs to 95% of FS
Crosstalk	1/2 count max, -80db
Input Impedance	>20KΩ
Absolute Max Ratings	± 15V
Converter Type	successive approximation
Linearity Error (end to end)	± 2 count
Input Stability	± 2 count
Gain Error	± 2 counts
Offset Calibration Error	± 5 counts
Max Inaccuracy	± 0.2% at 25°C, ± 0.4% at 0-60°C
Accuracy vs. Temperature	± 50 ppm/°C typical

## 8 pt. Analog In Module Voltage



**EZIO-8ANIV**  
**£109**

Module Specifications	
Number of Channels	8 Single Ended
Input Range	0-20mA or 4-10 mA DIP switch selectable
Resolution	12 bit (1 - 4096)
Step Response	200µs for 95% FS
Crosstalk	1/2 count max, -80db
Input Impedance	62.5Ω ± 0.1%
Absolute Max Ratings	-30mA to 30mA
Converter Type	Successive Approximation
Linearity Error (end to end)	± 2 counts
Input Stability	± 1 count
Full-scale Calibration Error	± 10 counts @ 20mA
Offset Calibration Error	± 5 counts
Max Inaccuracy	± 0.3% @ 25°C, ± 0.6% @ 60°C
Accuracy vs. Temperature	± 50 ppm/°C typical
Recommended Fuse	.032 Amp, series 217 fast acting

## 8 pt. Analog In Module Current



**EZIO-8ANIC**  
**£109**

## 4 pt. Analog In 4 pt. Analog Out Module Voltage



EZIO-4ANI4ANOV

## 4 pt. Analog In 4 pt. Analog Out Module Current



EZIO-4ANI4ANOC

Module Specifications		
Analog Voltage Input Specs	Number of Channels	4 single ended
	Input Range	0-5, 0-10V DIP switch selectable
	Resolution	12 bit (1 - 4096)
	Step Response	200µs to 95% of FS
	Crosstalk	1/2 count max, -80db
	Input Impedance	>20KΩ
	Absolute Max Ratings	± 15V
	Converter Type	successive approximation
	Linearity Error (end to end)	± 2 count
	Input Stability	± 2 count
	Gain Error	± 2 counts
	Offset Calibration Error	± 5 counts
	Max Inaccuracy	± 0.2% at 25°C, ± 0.4% at 0-60°C
	Accuracy vs. Temperature	± 50 ppm/°C typical
Analog Voltage Output Specs	Number of Channels	4 single ended (1 common)
	Output Range	0-5 VDC, 0-10 VDC (DIP switch selectable)
	Resolution	12 bits (1 - 4096)
	Conversion Setting Time	100 µs for FS
	Crosstalk	1/2 count max, -80db
	Peak Output Voltage	± 18 VDC
	Offset Error	± 0.15% of range
	Gain Error	± 0.3% of range
	Linearity Error (end to end)	± 1 count
	Output Stability	± 2 counts
	Load Impedance	2k Ω min.
	Load Capacitance	.01 microF max
	Accuracy vs. Temperature	± 50 ppm/C typical

Module Specifications		
Analog Current Input Specs	Number of Channels	4 Single Ended
	Input Range	0-20mA or 4-10 mA DIP switch selectable
	Resolution	12 bit (1 - 4096)
	Step Response	1ms for 95% FS
	Crosstalk	1/2 count max, -80db
	Input Impedance	62.5Ω ± 0.1%
	Absolute Max Ratings	-30mA to 30mA
	Converter Type	Successive Approximation
	Linearity Error (end to end)	± 2 counts
	Input Stability	± 1 count
	Full-scale Calibration Error	± 10 counts @ 20mA
	Offset Calibration Error	± 5 counts
	Max Inaccuracy	± 0.3% @ 25°C, ± 0.6% @ 60°C
	Accuracy vs. Temperature	± 50 ppm/°C typical
Recommended Fuse	.032 Amp, series 217 fast acting	
Analog Current Output Specs	Number of Channels	4 single ended
	Output Range	0-20mA, 4-20mA (DIP switch selectable)
	Output Type	Current Sourcing
	Resolution	12 bit (1 - 4096)
	Max. Loop Voltage	30 VDC
	Load/loop Power Supply	0-300Ω/18-30 VDC
	Linearity Error (end to end)	± 2 counts
	Conversion Setting Time	100µs for FS
	Full-scale Calibration Error	± 12 counts
	Offset Calibration Error	± 6 counts
	Max. Full-scale Inaccuracy (all errors included)	± 0.3%

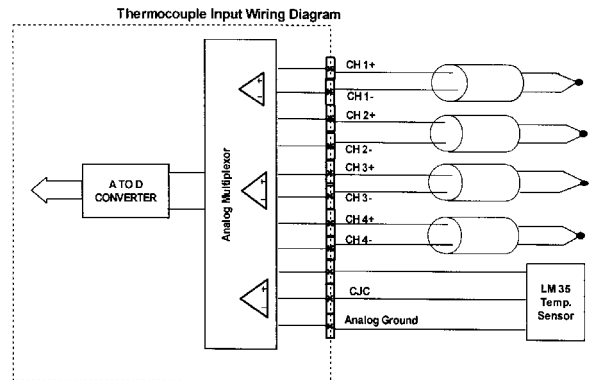


# Thermocouple Input Module

Module Specifications	
Number of Channels	4, differential
Common Mode Range	-1.5 VDC to +4.0 VDC
Common Mode Rejection	100dB min. @ VDC 50/60Hz
Input Impedance	5MΩ
Absolute Maximum Ratings	Fault-protected inputs to ±50 VDC
Accuracy vs. Temperature	± 15ppm/°C max. 0-1.25V ±35 ppm/°C max. (including max. offset change)
PLC Update Rate	4 channels per scan
Base Power Required	10mA @ 3.3 VDC supplied by base
Operating Temperature	32° to 140°F (0° to 60°C)
Storage Temperature	-4° to 158°F (-20° to 70°C)
Relative Humidity	5 to 95% (non-condensing)
Environmental Air	No corrosive gases permitted
Vibration	MIL STD 810C 514.2
Shock	MIL STD 810C 516.2
Noise Immunity	NEMA ICS3-304
Replacement Terminal Block	EZIO-TERM11CJC (comes with CJC)



**EZIO-4THI**  
**£139**



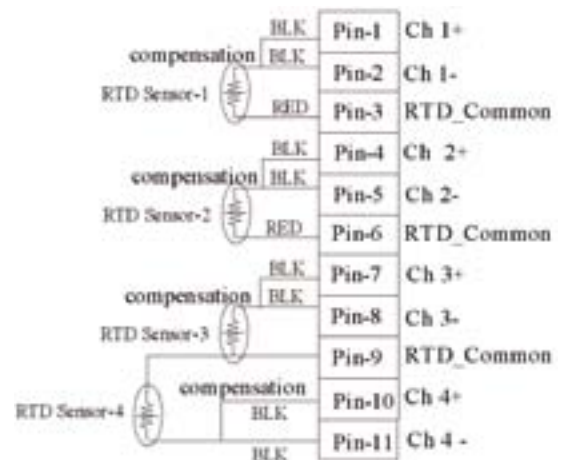
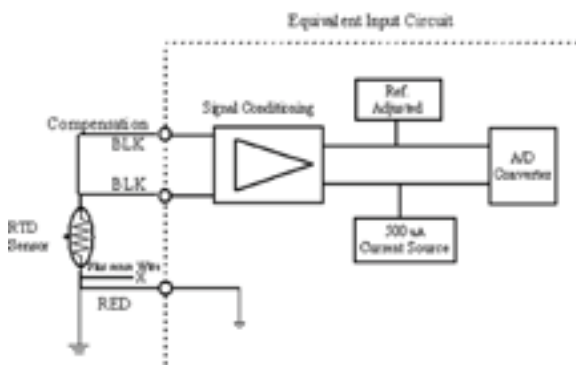
Thermocouple Specifications			
Input Ranges	Type J	Range in C -190 to 760°C	Range in F -310 to 1400°F
	Type K	-150 to 1372°C	-238 to 2502°F
	Type S	65 to 1768°C	149 to 3214°F
	Type T	-230 to 400°C	-382 to 752°F
Display Resolution	± 0.1°C or ± 0.1°F		
Cold Junction Compensation	Automatic		
Conversion Time	1ms per channel		
Warm-Up Time	30 minutes typically ± 1°C repeatability		
Linearity Error (End to End)	± 1°C max. ± 0.5°C typical		
Maximum Inaccuracy	± 3°C (excluding thermocouple error)		

Pinout Information	
Pin No.	4 Thermocouple Input
1	CHAN1 + ( Input)
2	CHAN1 - ( Input)
3	CHAN2 + ( Input)
4	CHAN2 - ( Input)
5	CHAN3 + ( Input)
6	CHAN3 - ( Input)
7	CHAN4 + ( Input)
8	CHAN4 - ( Input)
9	+ 5 VDC
10	Vout ( Temp. Sensor)
11	Analog GND

# EZ I/O™

Module Specifications	
Number of Channels	4
Common Mode Range	0-3.3 VDC
Converter Type	12-bit
Update Rate	All Channels per scan
Input Words Required	4 IR Words
Temperature Drift	50 ppm / °C (max)
Maximum Inaccuracy	+ / - 3 °C
RTD Excitation Current	500 uA
Operating Temperature	0 °C to 60 °C
Storage Temperature	-20 °C to 70 °C
Relative Humidity	5 to 95 %
Terminal Block	300 Volt/10 Amp/ 14 AWG UL Rating
Optical Isolation	2500 Volt

## 4 pt. RTD Input Module



RTD Input Ranges			
RTD Input Ranges	Temperature Coefficient of Resistance (TCR) ( $\Omega/\Omega^{\circ}\text{C}$ )	Temperature Ranges	Resolution
Pt100	0.00385	-200 °C to + 850 °C	0.29
120 Ni	0.00672	-80 °C to 260 °C	0.22
10 Cu	0.00427	-200 °C to 260 °C	2.64

Pinout Information	
1	CHAN1 +
2	CHAN1 -
2	RTD_COMMON
4	CHAN2 +
5	CHAN2 -
6	RTD_COMMON
7	CHAN3 +
8	CHAN3 -
9	RTD_COMMON
10	CHAN4 +
11	CHAN4 -

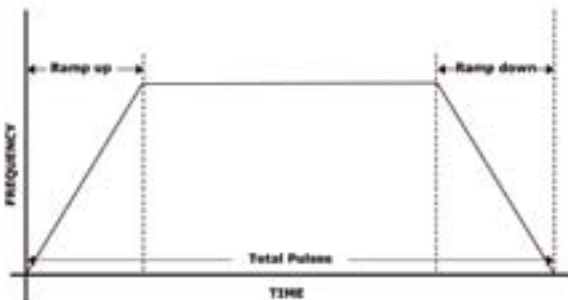


# Pulse Width/Pulse Train Module

The EZIO-PM module is an intelligent module for use with the EZSeries PLCs and provide either Pulse Train Output (PTO) or Pulse Width Modulator (PWM) outputs. The -P and -N module offer 2 channels of outputs. The -D module offers one channel of differential output. Each channel can be independently programmed to be either PTO or PWM. “P” type or sourcing outputs are provided for EZIO-PM-P, “N” type or sinking outputs are provided for EZIO-PM-N model and Differential outputs are provided for EZIO-PM-D model. Please note that the “D” differential model has only one output.

## Pulse train Output (PTO) Function

In PTO mode, user specifies Ramp-up and Ramp-down time, total number of pulses to output (includes those generated during ramp up and down), and the frequency at run time. The module generates a pulse train output that ramps up from a minimum frequency (approx 40 Hz) to the user programmed maximum frequency within the ramp-up time. The module would ramp down at such a time so that the total number of pulses generated equals programmed number of pulses. In addition to the PTO output, the module provides a user controlled Direction output for each channel.



Pulse Train Output

## Quadrature Encoder Input

The module also accepts a quadrature input upto a frequency of 100KHz. the count can be multiplied by 2 or 4. 2<sup>32</sup> number of counts are allowed. The module allows internal attr or stop functions for PTO or PWM function based upon count value.

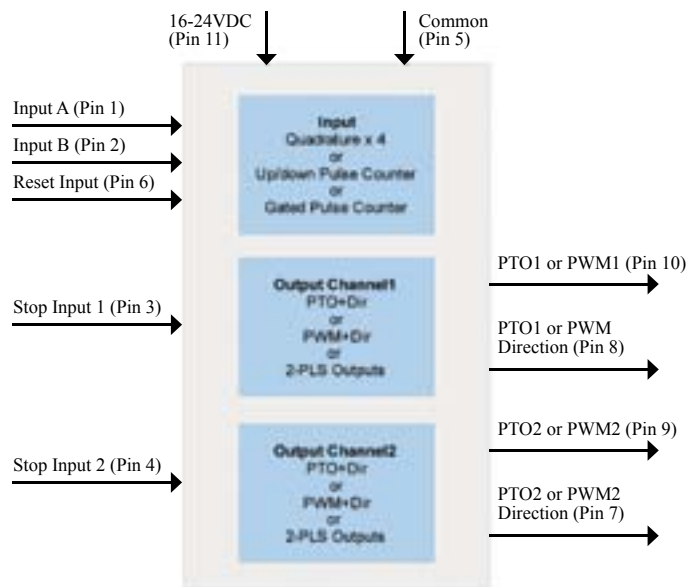
## Pulse Width Modulation (PWM) Function

In PWM mode, the module generates a Pulse output with varying duty cycle. The Ramp-up time, frequency and duty cycle is specified by the user, and the module generates a pulse outputs waveform with the specified parameters. The duty cycle goes from 0 to the programmed value within the ramp up time. User also has control over Direction output for each channel.



**EZIO-PM-P EZIO-PM-N  
EZIO-PM-D**

## Functional Block Diagram



\* Differential output module has only one output  
 \* Outputs use ET727 10-30V output chips with 20mA drive and short circuit protection  
 \* Pins 10 & 8 become positive and Pins 9 & 7 become negative terminals in case of differential outputs.



Pulse Width Modulation



# High Speed Counter Module

EZIO System supports two High Speed 24 bit Counter Modules with PLS outputs that accept quadrature encoder inputs. The PLS outputs compare the counter value to two on/off presets and turn on outputs within 100µs of position change. Presets can be loaded into the counter modules from EZPLC. All inputs and outputs are optically isolated. In addition, PLS outputs are 0.5A short circuit proof DC outputs.



**EZIO-HSCM1**  
**EZIO-HSCM2**  
**£99**

**EZIO-HSCM1**  
**EZIO-HSCM2**

Module Specifications		
Feature	EZIO-HSCM1	EZIO-HSCM2
Module Type	Intelligent High Speed Dual Counter Module	Intelligent High Speed Single Counter Module
Maximum Input Frequency	60KHz after 1X, 2X or 4X Multiplication	100KHz after 1X, 2X or 4X Multiplication
Minimum Pulse Width	5 µs	
Resource Options	1X, 2X, or 4X Quadrature, Up or Down Counter, Reset	
Counter Range	16 million (24 bits)	
Preset Modes	1. This mode will preset the counter to the preset value while preset is held high. While the preset signal is high, no new count signals will be counted. 2. This mode will create an interrupt on the rising edge of the reset signal to set the counter to the preset value. 3. This mode will create an interrupt on the falling edge of the preset signal to set the counter to the preset value. 4. This mode will create a preset pulse every time that there is a rising edge of signal A and the preset signal is high.	
Reset Modes/Input	None	Same as Preset except the reset input sets the counter value to zero
Inhibit Input	None	Inhibits the counter from counting when high

2 Counter Pin Out	
Pin No.	EZIO-HSCM2
1	Quad A encoder 1
2	Quad B encoder 1
3	Quad A encoder 2
4	Quad B encoder 2
5	Common
6	Preset
7	Counter 1 Output 1
8	Counter 1 Output 2
9	Counter 2 Output 1
10	Counter 2 Output 2
11	Vs+

1 Counter Pin Out	
Pin No.	EZIO-HSCM1
1	Quad A encoder 1
2	Quad B encoder 1
3	Inhibit
4	Reset
5	Common
6	Preset
7	Counter 1 Output 1
8	Counter 1 Output 2
9	Counter 1 Output 3
10	Counter 1 Output 4
11	Vs+

Counter Input Specifications		
Feature	EZIO-HSCM1	EZIO-HSCM2
Number of Inputs	5	
Input Voltage Range	14-28 VDC	
Peak Voltage	40 VDC	
Input Current	2.5 mA @ 14 VDC 5.0 mA @ 28 VDC	
Maximum Input Current	5 mA @ 28 VDC	
Input Impedance	5.6KΩ min. @ 14-28 VDC	
ON Voltage Level	> 14 VDC	
OFF Voltage Level	< 2 VDC	
Min. ON Current	2.5 mA	
Min. OFF Current	0.2 mA	
OFF to ON Response	< 2µs	
ON to OFF Response	< 3µs	
Status Indicators	Red LED for each input	
Commons	1 point	

PLS Output Specifications		
Feature	EZIO-HSCM1	EZIO-HSCM2
Number of Outputs	2 Source outputs for each counter	4 Source outputs
Response Time	100µs	
PLS Setpoints	1 on/off pair for each output	
Peak Voltage	50.0 VDC	
Maximum Steady State Output Current	0.5A per output, 1.0A max per module @ 50°C	
Maximum Leakage Current	100µA @ 50 VDC @ 50°C	
ON Voltage Drop	2 VDC @ 0.5A	
Maximum Inrush Current	0.8A for 10ms	
OFF to ON Response	< 2µs	
ON to OFF Response	< 10µs	
Status Indicators	Red LED for each output	
+V Terminals & Commons	One V*, 1 Common	
Short Circuit Protection	1 Amp per module, turns off outputs upon short circuit detection	
Optical Isolation	2500 Volt	

# Product Overview

**EZPanel™**

**PLC Touch Panel  
4" to 15" Display**



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£199

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**Text Panel with  
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**EZAutomation**