

EZ I/O™

**COMPACT, POWERFUL, FLEXIBLE
AND SENSIBLY PRICED**



EZI/O™

The Most SENSIBLE Real World I/O for All EZAutomation PLCs



Extremely Flexible DC In/DC Out Modules
£22

First Sensible Analog I/O
£109

First Sensible High Speed Counter and PLS Module 100 KHz, 100µs PLS
£99



What is EZI/O?

It is a newly developed real world I/O. It was designed by a group of engineers with over 200 years of collective experience in designing automation products and systems. It is an 8 point small footprint yet extremely powerful, modular and flexible I/O.

What does it have?

- All digital I/O optically isolated
- 8 point real world inputs or outputs
- Digital or 12 bit Analog
- Thermocouple Inputs
- 24 bit High Speed Counter and PLS

- 2 60 KHz Quadrature inputs and 2 PLS outputs for each encoder with 100µs response time
- 1 100 KHz Quadrature input with 4 PLS outputs, 100µs response time
- Interrupt Modules for a total of 40µs throughput
- DC outputs 24VDC @ 0.5 Amp short circuit proof
- AC outputs 120 VAC @ 1 Amp
- Relay outputs 200V @ 1 Amp
- Analog modules 0-5V @ 2 Amps, 0-10V, 0-20mA, 4-20mA, 12 bit
- Only occupies 2 x 2 x 1" space
- LED status indicators for all digital I/O
- EZ to wire Phoenix Plug-in terminal

blocks

- I/O Modules that snap onto the base
- 4 In / 4 Out Wide variety of "Mix-n-Match I/O Modules

Where does it make sense?

EZI/O is used with our EZPLCs, EZTouchPLCs and EZTextPLCs. This is simply the best I/O on the market today. If you need a lot of Analog I/O, you will save hundreds or even thousands of dollars using EZI/O. This I/O also has lots of potential as simply Remote I/O interfacing to DeviceNet, Profibus and Ethernet. And it will continue to expand every quarter!!

You Will Demand a Lot More From Your Current Supplier After You Look at These Features

Here is what you get for £22

- 8 24 VDC sourcing outputs
- 2500 VDC optical isolation
- Each output rated at 0.5 Amp
- Total module current 1.0 Amp
- All outputs short circuit proof
- Snap-in module
- LED status indicator for each output
- 11 Point-Phoenix removable terminal blocks
- 2 x 2 x 1" compactness



Here is what you get for £34

- 4 110 VAC Inputs
- 4 110 VAC Outputs
- 2500 VDC Optical Isolation
- Outputs rated at 1.0 amp each
- Snap-in module
- LED status indicator for each output
- 11 Point-Phoenix removable terminal blocks
- 2 x 2 x 1" compactness
- Base Power Consumption 20mA @ 3.3V maximum



Here is what you get for £109

- 4 Analog Inputs 0-5 VDC, 0-10 VDC
- 4 Analog Outputs
- 2500 VDC optical isolation
- 12 bit resolution
- Snap-in module
- 11 Point-Phoenix removable terminal blocks
- 2 x 2 x 1" compactness
- Input stability +/- 1 count
- Gain Error +/- 2 counts
- Linearity end to end +/- 2 counts
- Maximum inaccuracy 0.4% @ 60°C





We Looked at Every Detail!

Snap-In I/O Module

EZI/O modules are designed with one thing in mind - modularity! Each and every EZI/O module can be utilized with EZPLC, EZTouchPLC, and EZTextPLC for a truly modular I/O.

Mix-N-Match

AC and DC, input and outputs are mixed-n-matched to provide maximum flexibility.

Extremely Compact

2 x 2 x 1 inch

No Power Budgeting Required, Period!

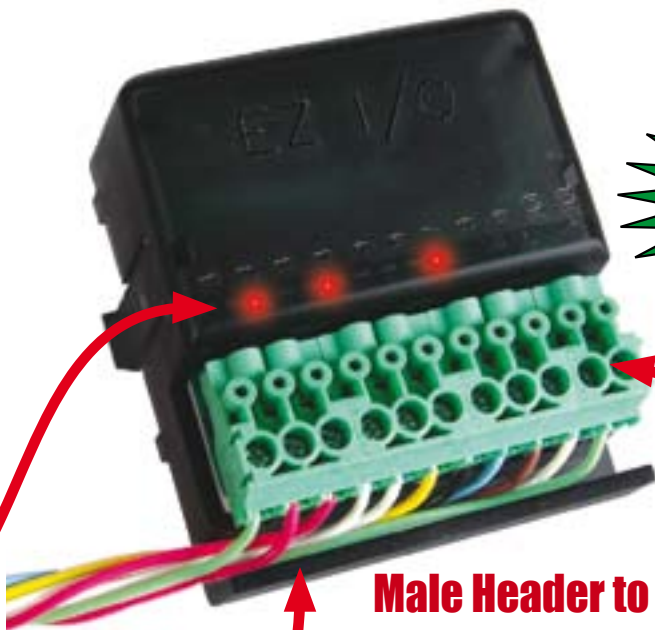
All EZ Family PLCs are designed to handle any combination of EZI/O modules without any need for external power supplies. EZI/O modules consume only 20-40 mA power at 3.3V.

I/O Status LED Indicators

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

Wiring Duct for Routing Field Wires

Every EZI/O module has a wiring duct for routing field wiring in neat bundles.



Starting From
£22

Male Header to Plug in an 11 Point Phoenix, Removable Terminal Block

EZI/O modules come with male headers to accommodate 11 point removable Phoenix terminal blocks (UL rated for 300V 10 amp 14AWG) for ease of wiring.

Up to one 14 Gauge
Up to two 18 Gauge
Up to four 22 Gauge
Wires in One Terminal

EZI/O Manual and Accessories		
Part	Description	Price
EZIO-M	Hardware Manual for EZIO Modules. Note: EZIO Modules are shipped without User Manual. Sold separately	£15
EZIO-DUMMY	Dummy Module for EZPLC, EZTouchPLC, and EZTextPLC Open Slots	£5
EZIO-TERM11	11 Pin Removable 3.5mm Phoenix Terminal Block for EZIO Modules	£5
EZIO-SCDRV	Pack of 2 (2.5mm blade) Screwdrivers	£5



Head to Head Comparisons

8 Point DC Output Module - Head to Head

Features	EZI/O EZP-8DCOP	DL05/06 D0-10TD2	MicroLogix 1200 1762-ob8	MicroLogix 1500 1769-ob8
Total Outputs	8 (24 VDC)	10 (24 VDC)	8 (24 VDC)	8 (24 VDC)
Short Circuit Proofing	Yes	No	No	No
Removable Terminal Block	Yes	Yes	No	No
Optical Isolation	Yes	Yes	Yes	Yes
Max Output Current/Point	0.5 Amp	0.3 Amp	0.5 Amp	2.0 Amp
Max Module Output Current	1.0	1.5 Amp	4.0 Amp	8.0 Amp
Status Indicator	8 LEDs (1 per output point adjacent to output terminal)	Only 1 for Module Activity	8 LEDs	8 I/O diagnostic LEDs
Base Power Consumption	40mA	150mA Max	115 mA @ 5 VDC (0.575W)	145 mA at 5 VDC(0.725W)
Price	\$22	\$49	\$144	\$237

4 Point Thermocouple Input Module - Head to Head

Features	EZI/O EZIO-4THI	DL05/06 F0-04THM	MicroLogix 1200 1762-IT4	MicroLogix 1500
Number of Channels	4 Channel	4 Differential	4 input channels plus a CJC sensor	6 Input Channels with 2 CJC sensors
Absolute Max Rating	Full protected up to ± 50 VDC	Full protected up to ± 50 VDC	± 35 VDC continuous	± 30 VDC
Base Power Consumption	10mA @ 3.3 VDC	30mA @ 5 VDC	40mA @ 5 VDC	100 mA @ 5 VDC
Linearity Error End to End	$\pm 1^\circ\text{C}$	$\pm 1^\circ\text{C}$	N/A	N/A
Maximum Inaccuracy excluding Thermocouple Error	$\pm 2^\circ\text{C}$	$\pm 3^\circ\text{C}$	$\pm 7.5^\circ\text{C}$ for Ktype	$\pm 7.5^\circ\text{C}$ for K type
Types of Thermocouples	J, K, S, T	J, E, K, R, S, T, B, N, C Type input ranges	J, N, T, K, E, S, R, C, B	J, N, T, K, E, S, R, C, and B Type
Cold Junction Compensation	Automatic	Automatic	Automatic	Automatic
Price	\$139	\$199	\$412	\$970

4 Analog In 4 Analog Out Module - Head to Head

Features	EZI/O EZIO-4ANI4ANOV	DL05/06 F0-2AD2AD-2	MicroLogix 1200 1762-if20f2	GE Versamax Micro IC200UEX626
Total Analog I/O	4 Analog In/4 Analog Out	2 Analog In/2 Analog Out	2 differential inputs/2 single ended outputs	4 Analog In 2 Analog Out
Removable Terminal Block	Yes	Yes	Yes	Yes
Input Range	0 to 5VDC; 0-10VDC	0 to 5VDC; 0-10VDC	Voltage: 0-10V	-10V to +10V
Input Resolution	12 Bit	12 Bit	12 Bit	12 Bit
Input Linearity Error	± 2 counts	± 2 counts	NA	± 3 LSB maximum
Output Range	0-5VDC; 0-10VDC	0-5VDC; 0-10VDC	0-10V	0-10V
Output Resolution	12 Bit	12 Bit	12 Bit	12 Bit
Maximum Inaccuracy	$\pm 0.3\%$ at 60°C	$\pm 0.6\%$ at 60°C	NA	$\pm 1\%$
Price	\$109	\$149 x 2 = \$298	\$294 x 2 = \$588	\$239 x 2 = \$478



EZI/O as Remote I/O on Ethernet, DeviceNet and Profibus Networks

Save 50 to 200% over Terminator I/O and 1/3rd to 1/6th the cost of AB Flex I/O and GE Versamax Remote I/O

EZI/O is an excellent choice of Field I/O for low cost I/O expansion of PLCs. All you need is Ethernet or DeviceNet or Profibus on the PLC network. The local processor in this configuration is also capable of performing local logic if you choose to do. This processor is also capable of storing 64K byte of data.

Let's Compare some basic Digital I/O DeviceNet

32 Point Field Remote I/O - Head to Head		
Features	EZI/O	Terminator I/O
Base with DeviceNet	EZPLC-D-32 w/ DeviceNet \$201	T1K-DEVNETS \$149
16 Inputs 24 VDC	2 of EZIO-8DCI \$44	2 of T1K-08ND3 \$106
16 Outputs 0.5A @ 24 VDC	2 of EZIO-8DCOP \$44	2 of T1K-08TD2-1 \$126
Price	\$289	\$401

Profibus

32 Point Field Remote I/O - Head to Head		
Features	EZI/O	Terminator I/O
Base with Profibus	EZPLC-D-32 w/ Profibus \$261	T1H-PBC \$309
16 Inputs 24 VDC	2 of EZIO-8DCI \$44	2 of T1K-08ND3 \$106
16 Outputs 0.5A @ 24 VDC	2 of EZIO-8DCOP \$44	2 of T1K-08TD2-1 \$126
Price	\$349	\$541

Ethernet

32 Point Field Remote I/O - Head to Head		
Features	EZI/O	Terminator I/O
Base with Ethernet	EZPLC-D-32E \$222	T1K-EBC \$199
16 Inputs 24 VDC	2 of EZIO-8DCI \$44	2 of T1K-08ND3 \$106
16 Outputs 0.5A @ 24 VDC	2 of EZIO-8DCOP \$44	2 of T1K-08TD2-1 \$126
Price	\$310	\$431



EZPLC-D-32
 Standard - £122
 Ethernet - £222
 with DeviceNet - £201
 with Profibus - £261



EZPLC-D-48
 Standard - £165
 Ethernet - £265
 with DeviceNet - £244
 with Profibus - £304



EZPLC-D-64
 Standard - £187
 Ethernet - £287
 with DeviceNet - £266
 with Profibus - £326



EZPLC-D-96
 Standard - £219
 Ethernet - £319
 with DeviceNet - £298
 with Profibus - £358

SAVE TWICE AS MUCH WITH ANALOG!

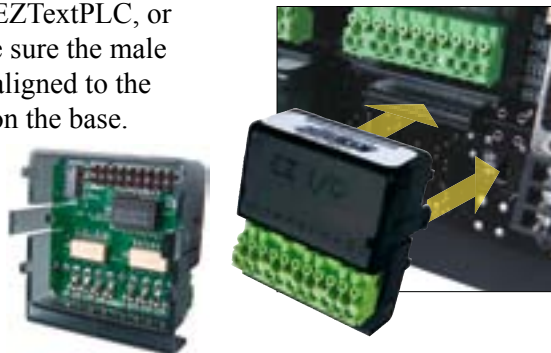
EZI/O™ EZI/O Module Installation and Wiring

Inserting and Removing I/O Modules

Insert I/O Modules

EZI/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 EZI/O module



Remove I/O Modules

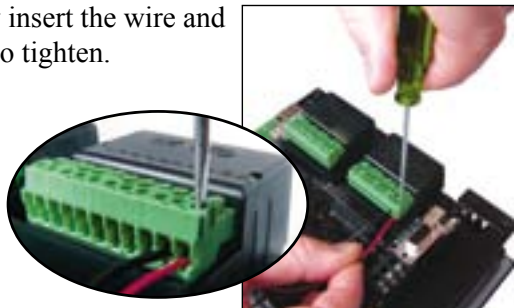
Removed from the slots by pressing the two clips inward on the sides of the module to release the clips from the base. You may need to use your thumb to apply enough force.



Removable Terminal Block and EZ Wiring

Wiring EZI/O Modules

Simply insert the wire and screw to tighten.



Wiring Duct

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



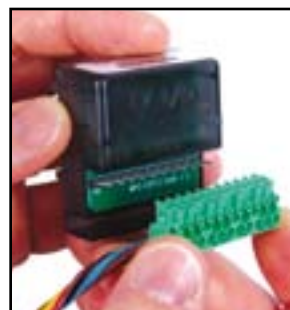
Removing Terminal Blocks

As EZI/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.

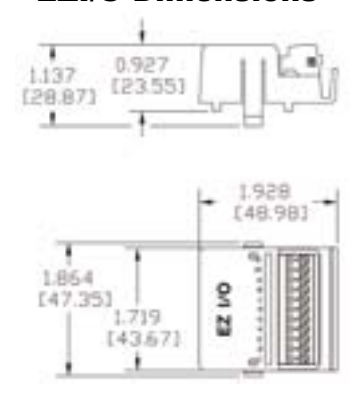


Inserting Terminal Blocks

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



EZI/O Dimensions



Wiring Capabilities

UL rated at 300 volts, 10 amps
14 AWG

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

Screwdriver Required

EZI/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.



8 pt. 24VDC Input Module

EZIO-8DCI

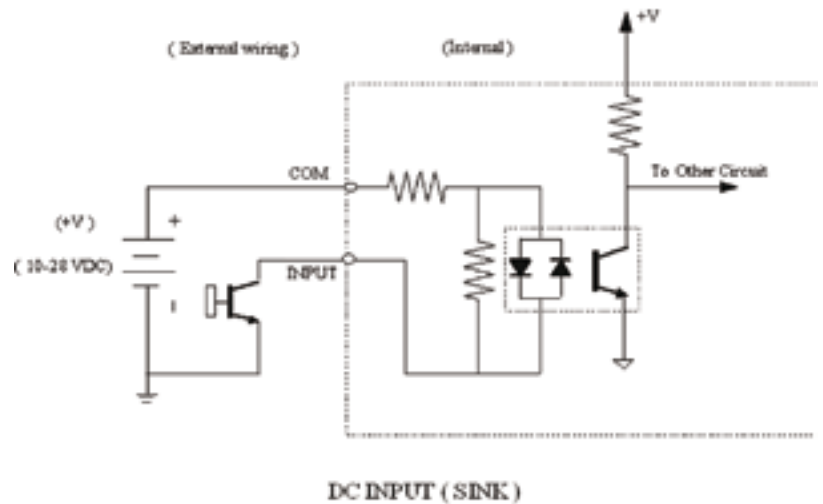
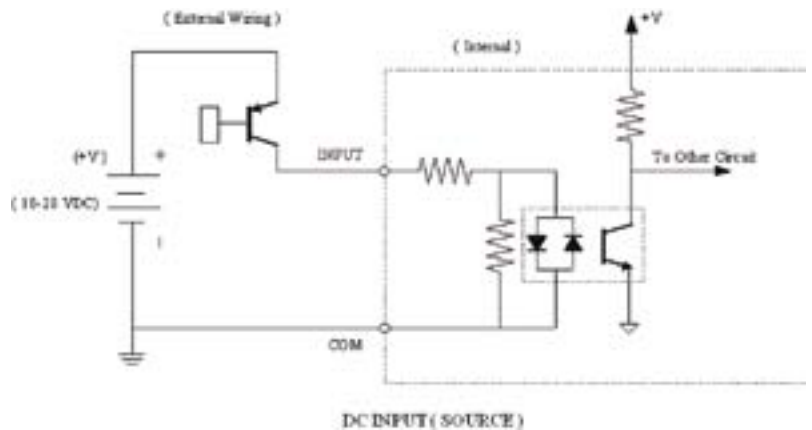


EZIO-8DCI
£22

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

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

Pinout Information	
Pin No.	EZIO-8DCI
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	COM
6	Input(5)
7	Input(6)
8	Input(7)
9	Input(8)
10	COM
11	Not Connected





8 pt. 24V DC Output Module (Source)

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	100 μ A @ 50 VDC @ 50°C
ON Voltage Drop	2 VDC @ 0.5A
Maximum Inrush Current	0.8A for 10ms
OFF to ON Response	< 2 μ s
ON to OFF Response	<10 μ s
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

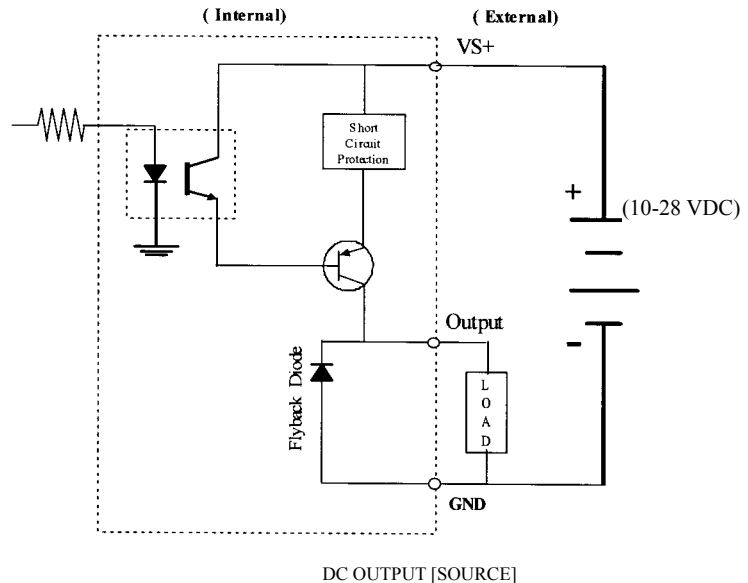
EZIO-8DCOP



EZIO-8DCOP
£22

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Pinout Information	
Pin No.	EZIO-8DCOP
1	Output(1)
2	Output(2)
3	Output(3)
4	Output(4)
5	GND
6	Output(5)
7	Output(6)
8	Output(7)
9	Output(8)
10	GND
11	Customer_Supply(+VS)





8 pt. 24VDC Output Sinking Module

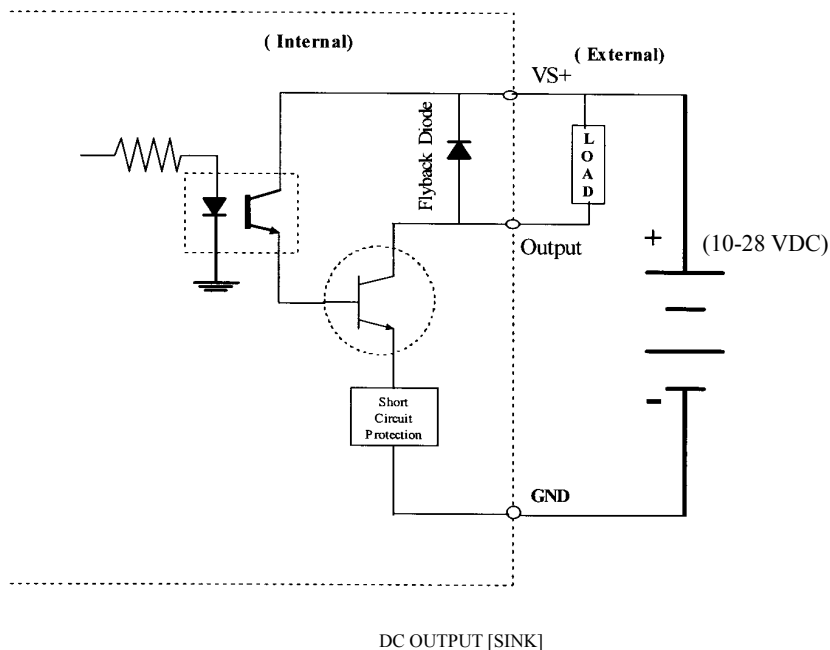
Module Specifications	
Number of Outputs	8 sinking
Peak Voltage	50.0 VDC
Maximum Steady State Output Current	0.5A per output, 1.4A max per module @ 50°C
Maximum Leakage Current	100µA @ 50 VDC @ 50°C
ON Voltage Drop	1.3 VDC @ 0.5A
Maximum Inrush Current	1.0A for 10ms
OFF to ON Response	< 2µs
ON to OFF 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

EZIO-8DCON



Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Pinout Information	
Pin No.	EZIO-8DCON
1	Output(1)
2	Output(2)
3	Output(3)
4	Output(4)
5	GND
6	Output(5)
7	Output(6)
8	Output(7)
9	Output(8)
10	GND
11	Customer_Supply(+VS)



DC OUTPUT [SINK]

EZIO™

8 pt. 24VDC High Speed Input Module

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 output
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

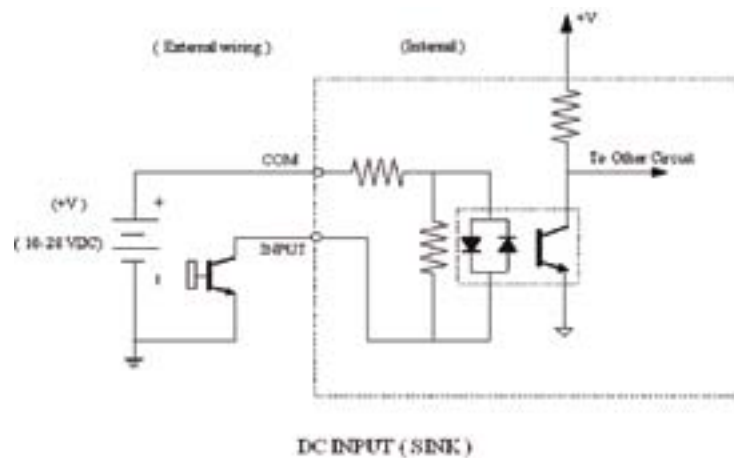
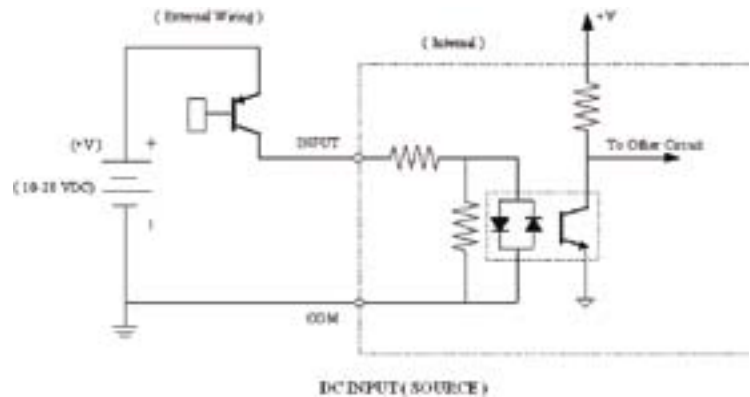
EZIO-8HSDCI



EZIO-8HSDCI

£27

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating



Pinout Information	
Pin No.	EZIO-8HSDCI
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	COM
6	Input(5)
7	Input(6)
8	Input(7)
9	Input(8)
10	COM
11	Not Connected



4 pt. 24VDC In/4 pt. 24VDC Out Sinking Module

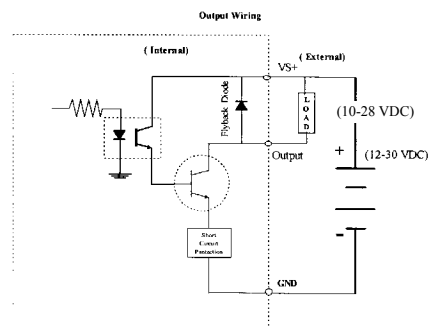
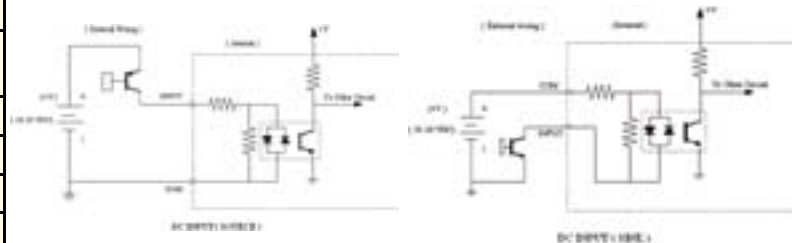
Module Specifications		
DC Power Supply Specs	Voltage Range	
	Number of Inputs	4 (sink/source)
DC Input Specs	Input Voltage Range	10-28 VDC
	Peak Voltage	40 VDC
	Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
	Maximum Input Current	5 mA @ 28 VDC
	Input Impedance	5.6k @ 10-28 VDC
	ON Voltage Level	> 10 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	1 point
	Fuse	No Fuse
	Base Power Required (3.3V)	Typical 8 mA (all inputs on)
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
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
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

EZIO-4DCI4DCON



**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

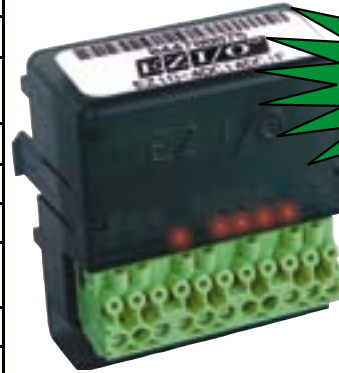
Pinout Information	
Pin No.	EZIO-4DCI4DCON
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	COM
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	GND
11	Customer_Supply(+VS)



EZ I/O™

4 pt. 24VDC In/4 pt. 24VDC Fast Input Module with Interrupt

EZIO-4DCI4DCIF



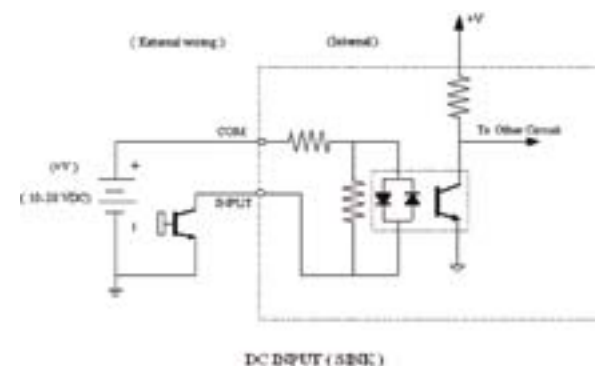
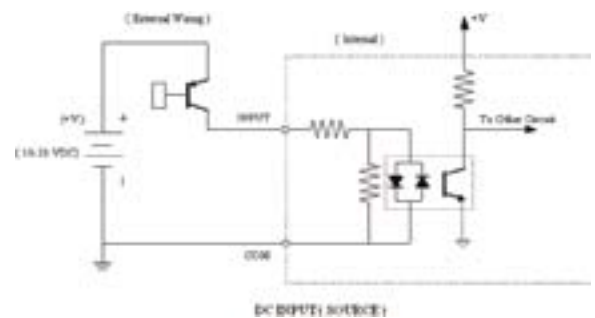
EZIO-4DCI4DCIF

£27

**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

Module Specifications		
DC Power Supply Specs	Voltage Range	
	Optical Isolation	2500 Volt
DC Input Specs (Standard)	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
	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	1 point
Base Power Required (3.3V)	Typical 3.5 mA (all inputs on)	
DC Input Specs (Fast)	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	0.2-0.4 ms, typical 0.3 ms For Inputs 5,6 and 7
	ON to OFF Response	0.2-0.4 ms, typical 0.3 ms For Inputs 5,6 and 7
	Interrupt	Low pass filter of 20µs, 60µs typical response time from input interrupt, 1 rung of processing and output activation, For Input # 8
	Status Indicators	Red LED for each output
	Commons	1 point
Fuse	No Fuse	
Base Power Required (3.3V)	Typical 3.5 mA (all inputs on)	

Pinout Information	
Pin No.	EZIO-4DCI4DCIF
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	GND
6	Fast Input(5)
7	Fast Input(6)
8	Fast Input(7)
9	Fast Input(8) - Interrupt
10	GND
11	Not Connected





4 pt. 24VDC In/ 4 pt. 24VDC Out Module (Source)

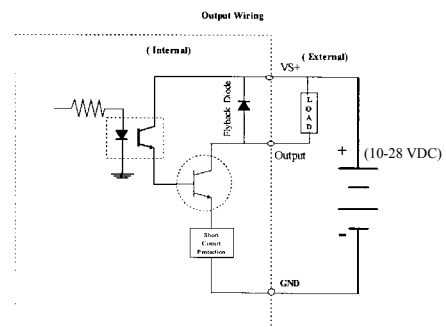
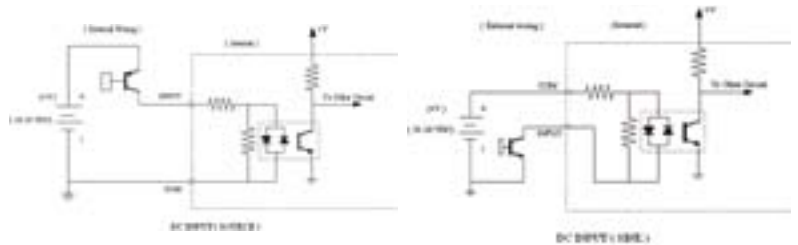
Module Specifications		
DC Power Supply Specs	Voltage Range	
	Number of Inputs	4 (sink/source)
DC Input Specs	Input Voltage Range	10-28 VDC
	Peak Voltage	40 VDC
	Input Current	1.92 mA @ 12 VDC 4.0 mA @ 24 VDC
	Maximum Input Current	5 mA @ 28 VDC
	Input Impedance	5.6k @ 10-28 VDC
	ON Voltage Level	> 10 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	1 point
	Fuse	No Fuse
	Base Power Required (3.3V)	Typical 7.5 mA (all inputs on)
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
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
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

EZIO-4DCI4DCOP



**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

Pinout Information	
Pin No.	EZIO-4DCI4DCOP
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	GND
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	GND
11	Customer_Supply(+VS)





8 pt. 110VAC Input Module

Module Specifications	
Number of Inputs	8
Input Voltage Range	70-132 VAC
AC Frequency	47-63 Hz
Peak Voltage	180 Volt
Input Current	0.5mA @ 110 VAC
Maximum Input Current	0.6mA @ 132 VAC
Input Impedance	200K
ON Voltage Level	70 VAC
OFF Voltage Level	40 VAC
OFF to ON Response	< 10ms
ON to OFF Response	< 10ms
Status Indicators	Red LED for each input
Commons	2 Commons
Fuse	No fuse
Base Power Required (3.3V)	20mA for all 8 on
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

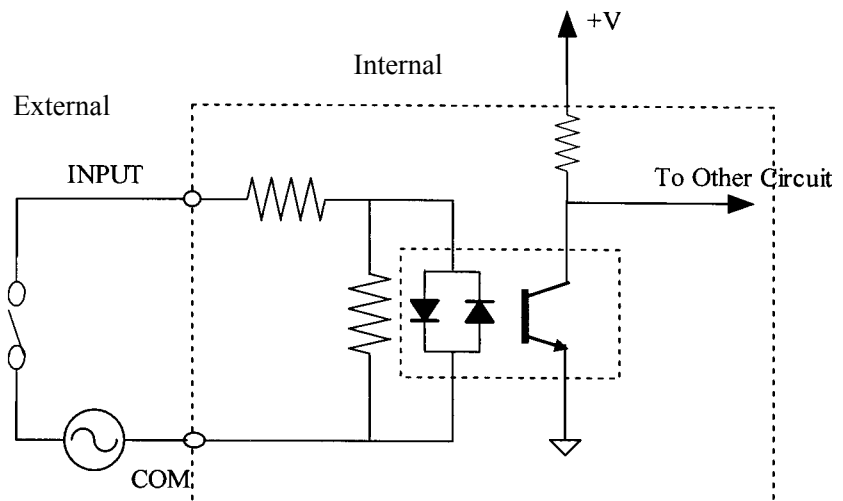
EZIO-8ACI



EZIO-8ACI
£34

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Pinout Information	
Pin No.	EZIO-8ACI
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	AC_Common
6	Input(5)
7	Input(6)
8	Input(7)
9	Input(8)
10	AC_Common
11	Not Connected





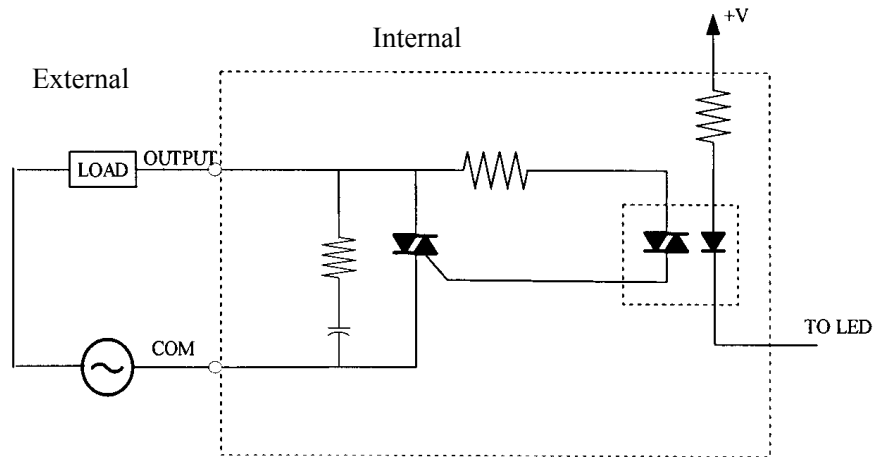
8 pt. 110VAC Output Module

Module Specifications	
Number of Output Points	8
Number of Commons	2
Output Voltage Range	20-132 VAC
Peak Voltage	180 Volt
ON Voltage Drop	1.2 V @ 1A
Maximum Current	1.2 A @ 25°C, 0.8A @ 50°C for each output
Maximum Leakage Current	1mA @ 132 VAC
Maximum Inrush Current	38Amps for 16.6ms
Minimum Load	15mA
OFF to ON Response	max 1/2 cycle
ON to OFF Response	max 1/2 cycle
Fuse	No fuse
Base Power Required (3.3V)	70mA for all 8 on
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG



**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

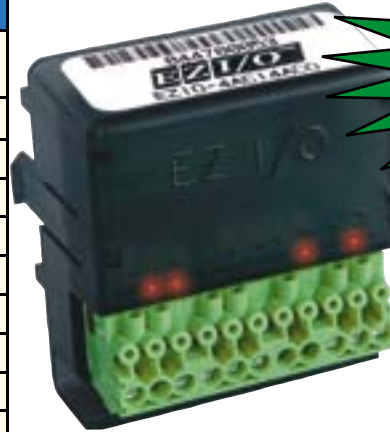
Pinout Information	
Pin No.	EZIO-8ACO
1	Output(1)
2	Output(2)
3	Output(3)
4	Output(4)
5	AC_Common
6	Output(5)
7	Output(6)
8	Output(7)
9	Output(8)
10	AC_Common
11	Not Connected



EZI/O™

4 pt. 110VAC In , 4 pt. 110VAC Out Module

EZIO-4ACI4ACO



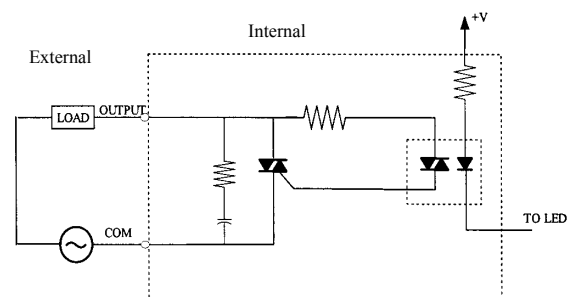
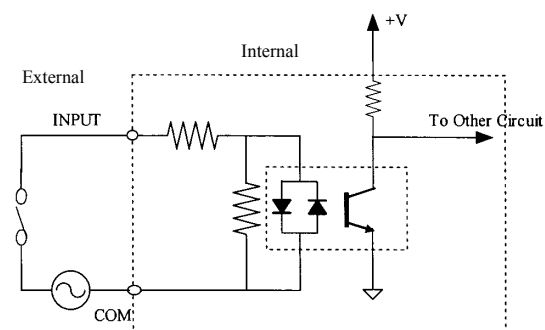
EZIO-4ACI4ACO
£34

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Module Specifications		
AC Power Supply Specs	Voltage Range	
AC Input Specs	Number of Inputs	4
	Input Voltage Range	70-132 VAC
	AC Frequency	47-63 Hz
	Peak Voltage	180 Volt
	Input Current	0.5mA @ 110 VAC
	Maximum Input Current	0.6mA @ 132 VAC
	Input Impedance	200K
	ON Voltage Level	70 VAC
	OFF Voltage Level	40 VAC
	OFF to ON Response	< 10ms
	ON to OFF Response	< 10ms
	Status Indicators	Red LED for each input
	Commons	1 Common
	Fuse	No fuse
	Base Power Required (3.3V)	10mA for all 4 on
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
AC Output Specs	Number of Output Points	4
	Number of Commons	1
	Output Voltage Range	20-132 VAC
	Peak Voltage	180 Volt
	ON Voltage Drop	1.2 V @ 1A
	Maximum Current	1.2 A @ 25°C, 0.8A @ 50°C for each output
	Maximum Leakage Current	1mA @ 132 VAC
	Maximum Inrush Current	38Amps for 16.6ms
	Minimum Load	15mA
	OFF to ON Response	max 1/2 cycle
	ON to OFF Response	max 1/2 cycle
	Fuse	No fuse
	Base Power Required (3.3V)	35mA for all 4 on
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

Pinout Information

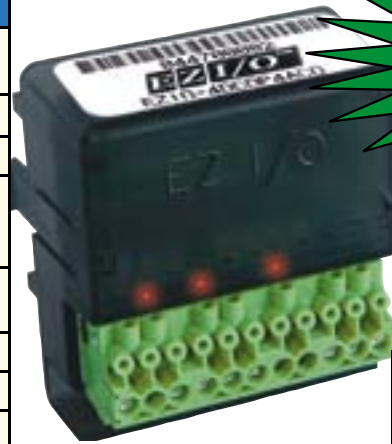
Pin No.	EZIO-4ACI4ACO
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	AC_Common
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	AC_Common
11	Not Connected





4 pt. 24VDC Out (Source), 4 pt. 110AC Out Module

EZIO-4DCOP4ACO

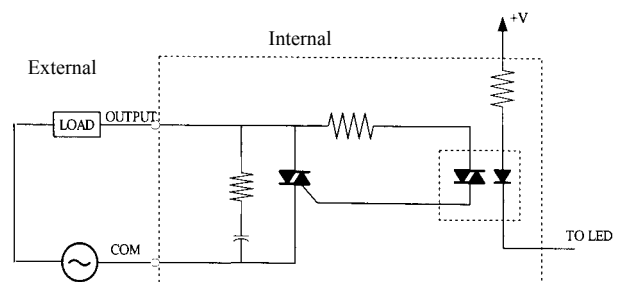
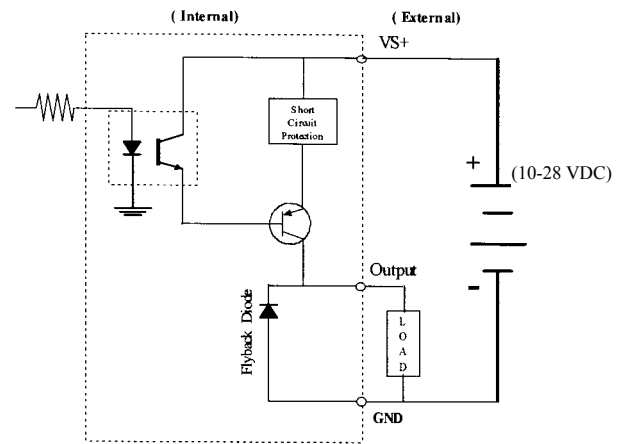


EZIO-4DCOP4ACO
£34

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Module Specifications		
AC/DC Power Supply Specs	Voltage Range	
	Number of Outputs	4 (sourcing)
DC Output Specs	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, for all 4 on
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
	AC Output Specs	Number of Output Points
Number of Commons		1
Output Voltage Range		20-132 VAC
Peak Voltage		180 Volt
ON Voltage Drop		1.2 V @ 1A
Maximum Current		1.2 A @ 25°C, 0.8A @ 50°C for each output
Maximum Leakage Current		1mA @ 132 VAC
Maximum Inrush Current		38Amps for 16.6ms
Minimum Load		15mA
OFF to ON Response		max 1/2 cycle
ON to OFF Response		max 1/2 cycle
Fuse		No fuse
Base Power Required (3.3V)		35mA for all 4 on
Optical Isolation		2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG	

Pinout Information	
Pin No.	EZIO-4DCOP4ACO
1	AC Output(1)
2	AC Output(2)
3	AC Output(3)
4	AC Output(4)
5	AC_Common
6	DC Output(5)
7	DC Output(6)
8	DC Output(7)
9	DC Output(8)
10	GND
11	Customer_Supply(+VS)



EZ I/O™

4 pt. 110VAC In/4 pt. 24V DC Out Module (Source)

EZIO-4ACI4DCOP

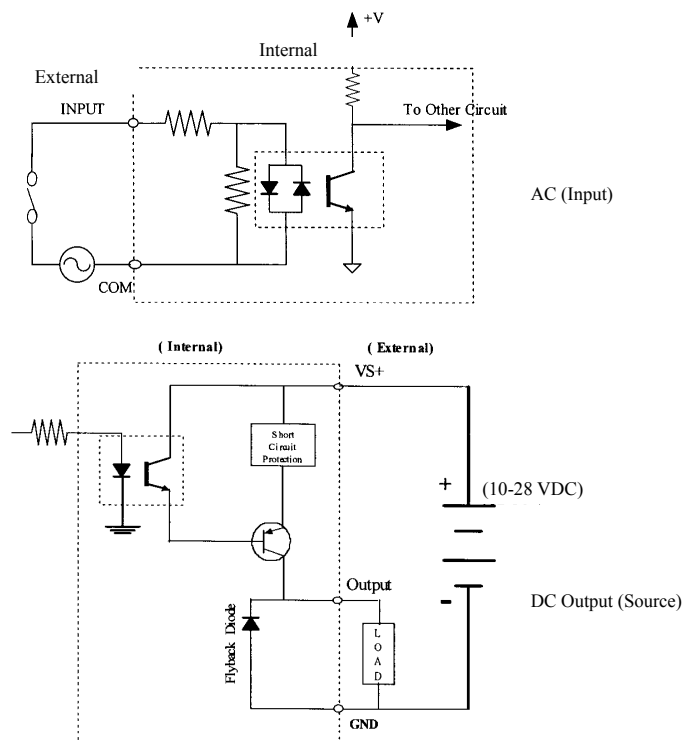


EZIO-4ACI4DCOP
£34

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Module Specifications		
AC/DC Power Supply Specs	Voltage Range	
AC Input Specs	Number of Inputs	4
	Input Voltage Range	70-132 VAC
	AC Frequency	47-63 Hz
	Peak Voltage	180 Volt
	Input Current	0.5mA @ 110 VAC
	Maximum Input Current	0.6mA @ 132 VAC
	Input Impedance	200K
	ON Voltage Level	70 VAC
	OFF Voltage Level	40 VAC
	OFF to ON Response	< 10ms
	ON to OFF Response	< 10ms
	Status Indicators	Red LED for each input
	Commons	1 Common
	Fuse	No fuse
	Base Power Required (3.3V)	10mA for all 4 on
Optical Isolation	2500 Volt	
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG	
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)	24mA, for all 4 on
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

Pinout Information	
Pin No.	EZIO-4ACI4DCOP
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	AC_Common
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	GND
11	Customer_Supply(+VS)





4 pt. 24VDC In/ 4 pt. 110VAC Out Module

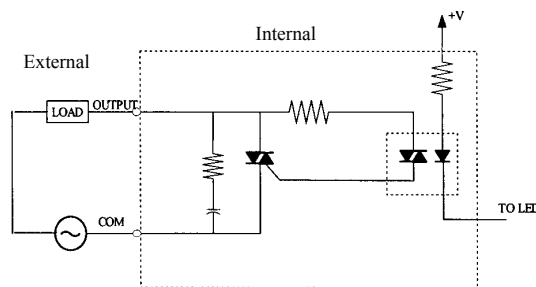
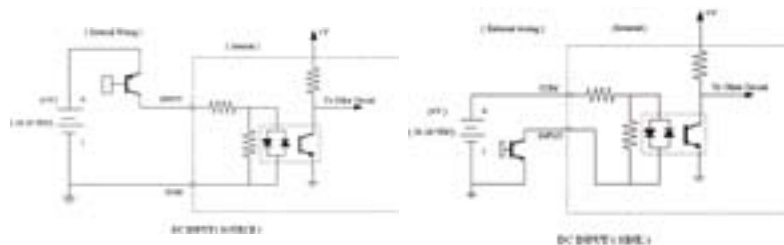
EZIO-4DCI4ACO



Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Module Specifications		
AC/DC Power Supply Specs	Voltage Range	
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	1 point
	Fuse	No Fuse
	Base Power Required (3.3V)	Typical 7.5 mA (all inputs on)
Optical Isolation	2500 Volt	
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG	
AC Output Specs	Number of Output Points	4
	Number of Commons	1
	Output Voltage Range	20-132 VAC
	Peak Voltage	180 Volt
	ON Voltage Drop	1.2 V @ 1A
	Maximum Current	1.2 A @ 25°C, 0.8A @ 50°C for each output
	Maximum Leakage Current	1mA @ 132 VAC
	Maximum Inrush Current	38Amps for 16.6ms
	Minimum Load	15mA
	OFF to ON Response	max 1/2 cycle
	ON to OFF Response	max 1/2 cycle
	Fuse	No fuse
	Base Power Required (3.3V)	35mA for all 4 on
	Optical Isolation	2500 Volt
	Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG

Pinout Information	
Pin No.	EZIO-4DCI4ACO
1	Input(1)
2	Input(2)
3	Input(3)
4	Input(4)
5	GND
6	Output(1)
7	Output(2)
8	Output(3)
9	Output(4)
10	AC_Common
11	Not Connected



EZI/O™

4 pt. Relay Out Module with built-in Electromagnetic shield

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

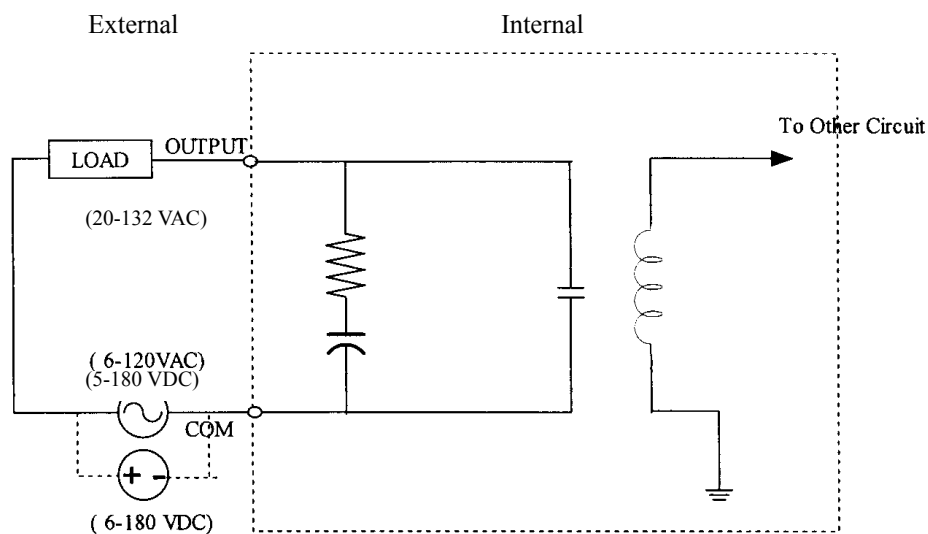
EZIO-4RLO



EZIO-4RLO
£39

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

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





4 pt. 110 AC In/4 pt. Relay Out Module with built-in Electromagnetic shield

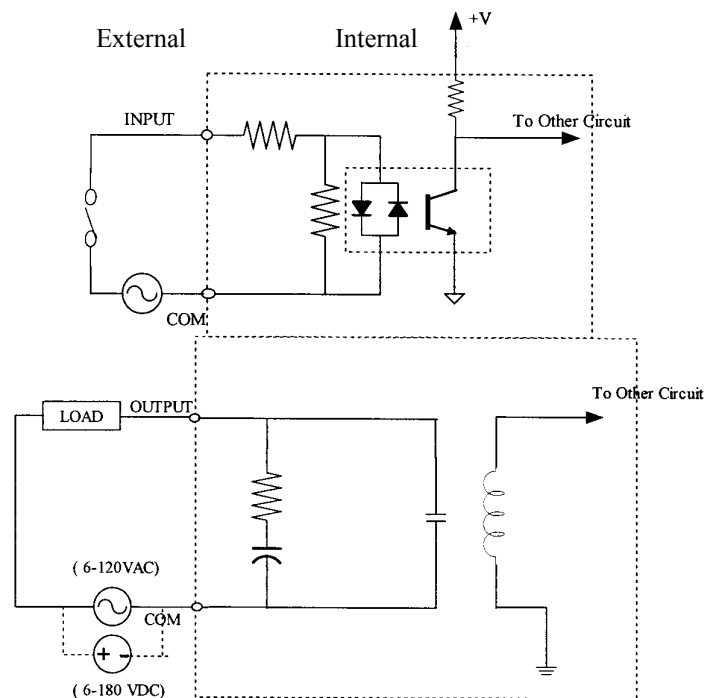
Module Specifications		
AC Input Specs	Number of Inputs	4
	Input Voltage Range	70-132 VAC
	AC Frequency	47-63 Hz
	Peak Voltage	180 Volt
	Input Current	0.5mA @ 110 VAC
	Maximum Input Current	0.6mA @ 132 VAC
	Input Impedance	200K
	ON Voltage Level	70 VAC
	OFF Voltage Level	40 VAC
	OFF to ON Response	< 10ms
	ON to OFF Response	< 10ms
	Status Indicators	Red LED for each input
	Commons	1 Common
	Fuse	No fuse
	Base Power Required (3.3V)	10mA for all 4 on
	Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG	
Relay Output Specs	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	

EZIO-4ACI4RLO



**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

Pinout Information	
Pin No.	EZIO-4ACI4RLO
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



EZI/O™

4 pt. 24VDC In/4 pt. Relay Out Module with built-in Electromagnetic shield

EZIO-4DCIP4RLO



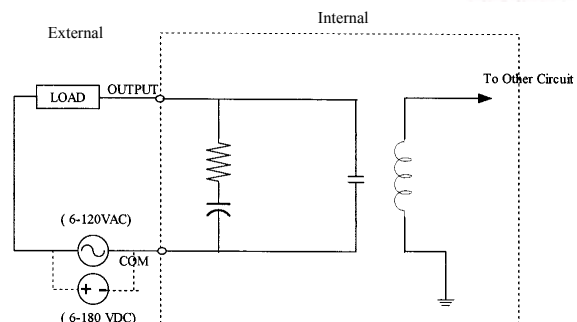
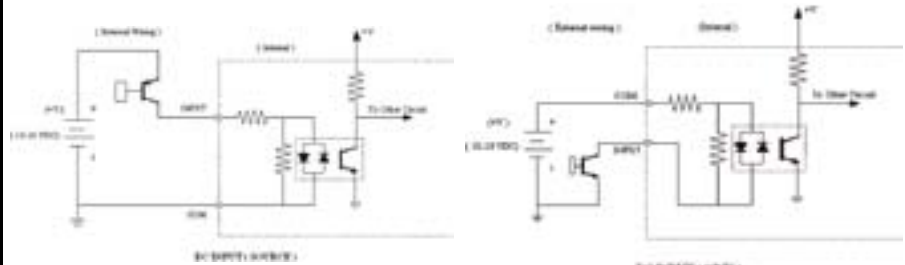
EZIO-4DCIP4RLO

£44

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

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)
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





8 pt. Analog In Module (Voltage)

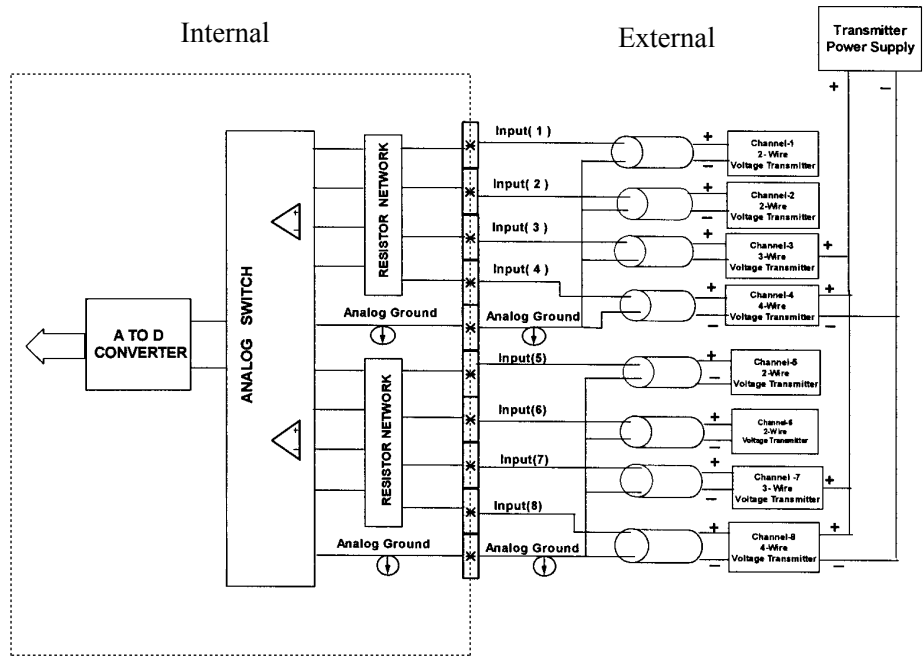
Module Specifications	
Number of Channels	8 single ended
Input Range	0-5, 0-10V DIP switch selectable
Resolution	12 bit (1 - 4096)
Step Response	200µs to 95% of FS
Crosstalk	1/2 count max, -80db
Input Impedance	>20KΩ
Absolute Max Ratings	± 15V
Converter Type	successive approximation
Linearity Error (end 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

EZIO-8ANIV



**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

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



EZ I/O™

8 pt. Analog In Module (Current)

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

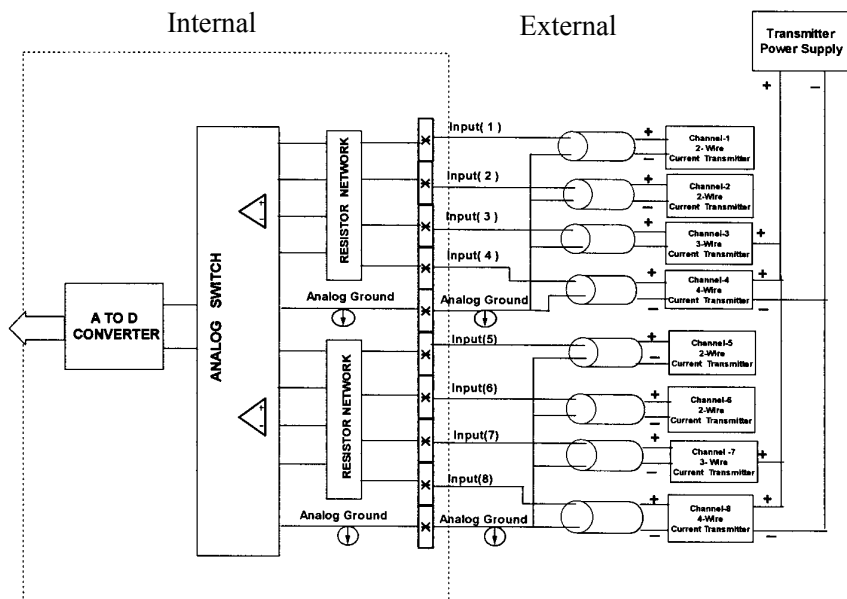
EZIO-8ANIC



EZIO-8ANIC
£109

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

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





4 pt. Analog In/4 pt. Analog Out Module (Voltage)

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

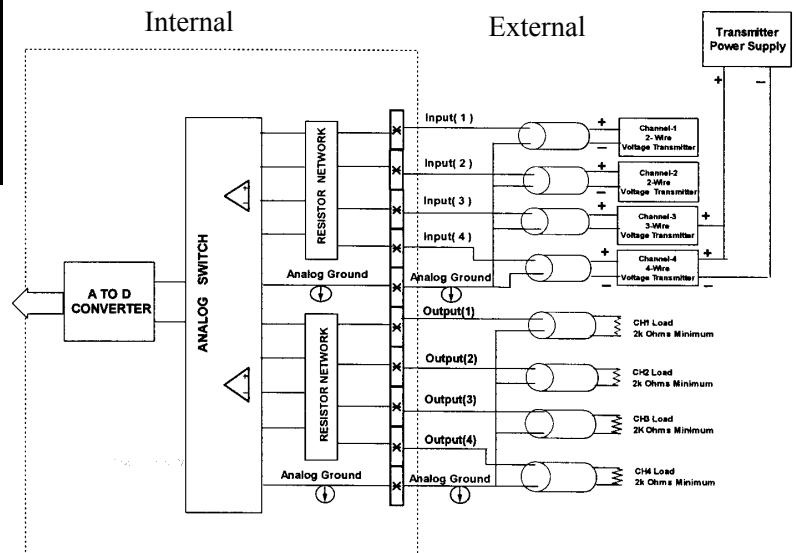
EZIO-4ANI4ANOV



EZIO-4ANI4ANOV
£109

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

Pinout Information	
Pin No.	EZIO-4ANI4ANOV
1	Output(1)
2	Output(2)
3	Output(3)
4	Output(4)
5	Customer_COM (Analog GND)
6	Input(1)
7	Input(2)
8	Input(3)
9	Input(4)
10	Customer_COM (Analog GND)
11	Not Connected



4 pt. Analog In/4 pt. Analog Out Module (Current)

Module Specifications		
AC 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	
AC 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%

EZIO-4ANI4ANOC



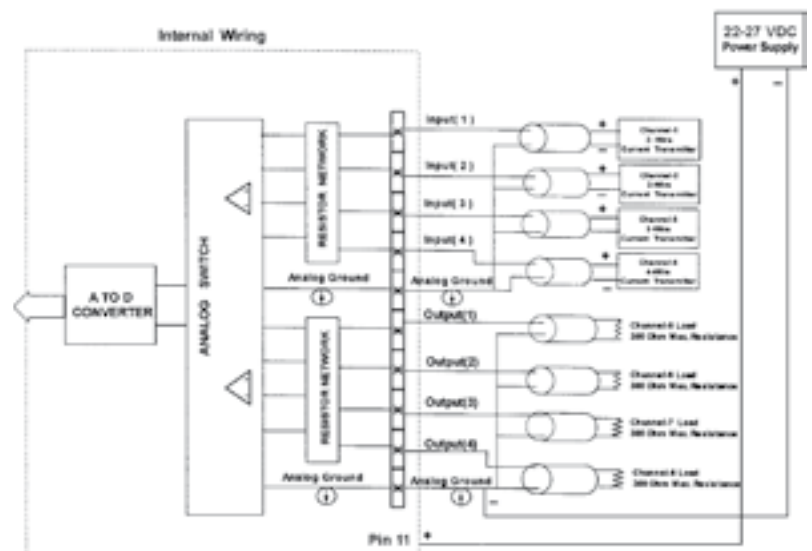
EZIO-4ANI4ANOC

£109
**Terminal Block
300 Volt/10 Amp/
14AWG UL Rating**

Pinout Information	
Pin No.	EZIO-4ANI4ANOC
1	Output(1)
2	Output(2)
3	Output(3)
4	Output(4)
5	Customer_COM (Analog GND)
6	Input(1)
7	Input(2)
8	Input(3)
9	Input(4)
10	Customer_COM (Analog GND)
11	22 - 27 VDC

Internal

External





Thermocouple Input Module

EZIO-4THI

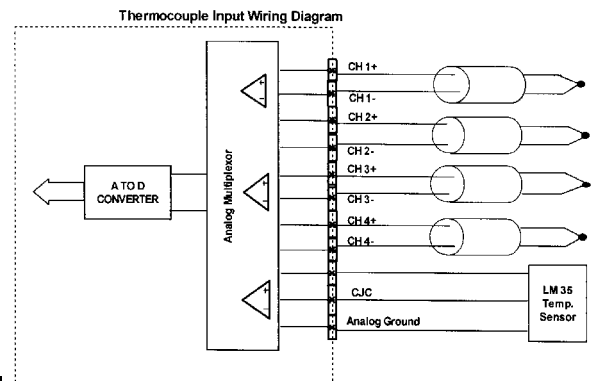


EZIO-4THI
£139

Terminal Block
300 Volt/10 Amp/
14AWG UL Rating

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)

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

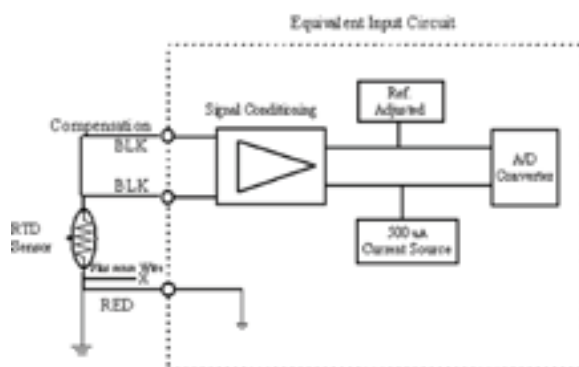
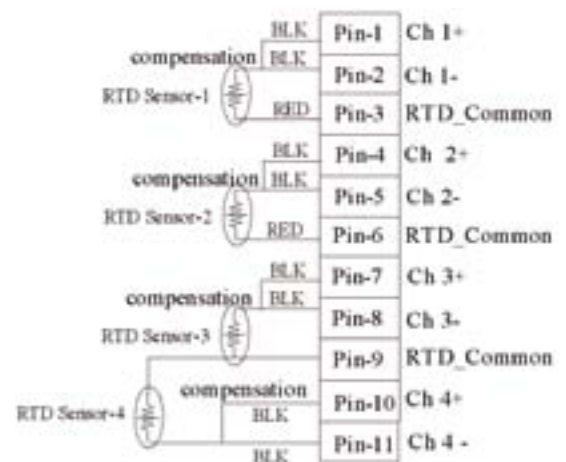


Thermocouple Specifications		
Input Ranges	Type J	Range in C: -190 to 760°C Range in F: -310 to 1400°F
	Type K	Range in C: -150 to 1372°C Range in F: -238 to 2502°F
	Type S	Range in C: 65 to 1768°C Range in F: 149 to 3214°F
	Type T	Range in C: -230 to 400°C Range in F: -382 to 752°F
Display Resolution	± 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)	



4 pt. RTD Input Module

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



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 -



High Speed Counter Modules with PLS Outputs

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.

The counters have various preset/reset and inhibit modes as shown on the following page.



Configuring your High Speed Counter Module is EZier than Ever!

1 In EZPLC's I/O configuration specify the range of registers to be used for input and output.



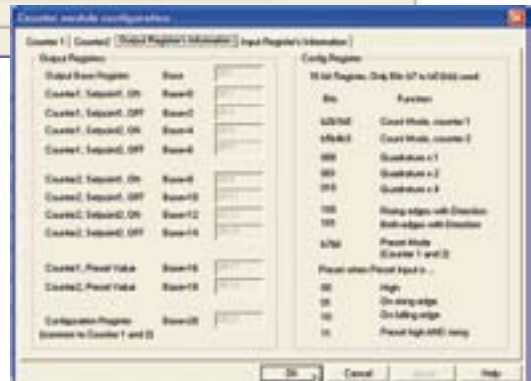
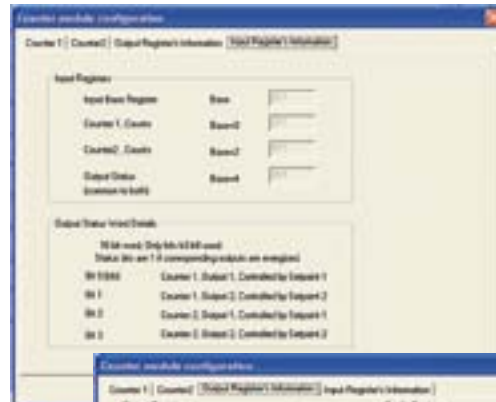
2 Configure pulse, direction, quadrature counting, set points, preset values and preset mode



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+

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+

3 Detailed information for input and output registers

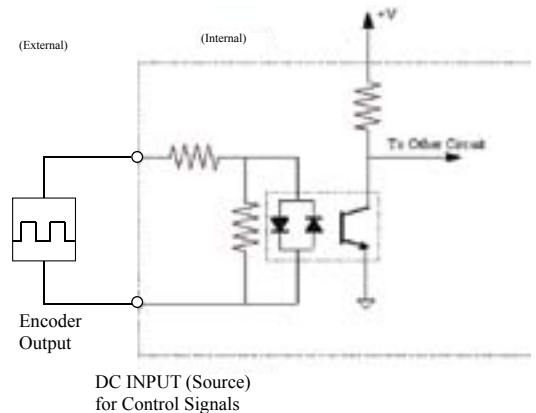
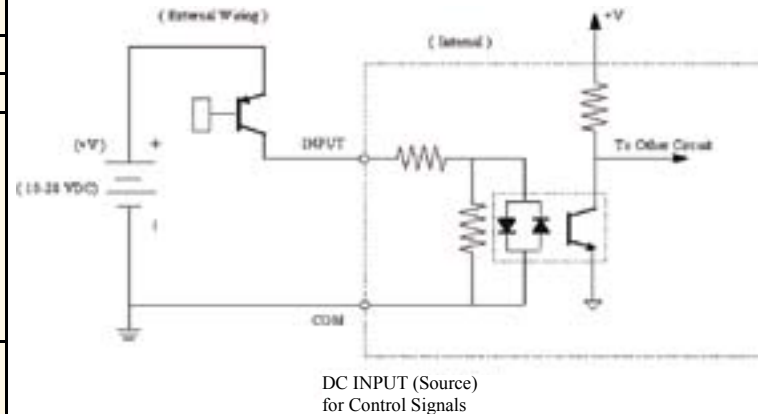




High Speed Counter Module Specifications

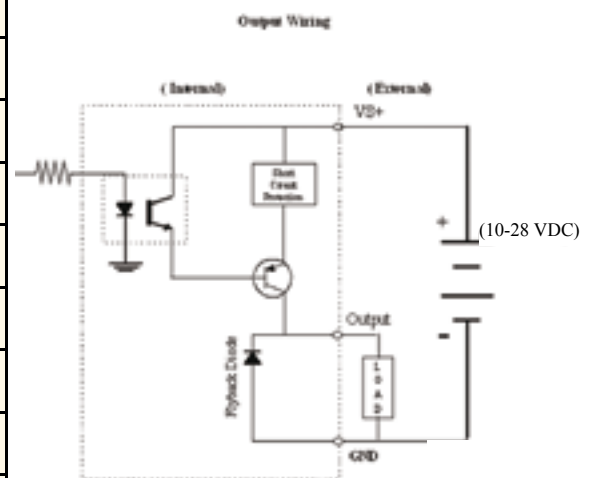
Module Specifications		
Feature	EZIO-HSCM1	EZIO-HSCM2
Module Type	Intelligent High Speed Dual Counter Module	Intelligent High Speed Single Counter Module
Maximum Input Frequency	60KHz after 1X, 2X or 4X Multiplication	100KHz after 1X, 2X or 4X Multiplication
Minimum Pulse Width	5 μ s	
Resource Options	1X, 2X, or 4X Quadrature, Up or Down Counter, Reset	
Counter Range	16 million (24 bits)	
Preset Modes	<ol style="list-style-type: none"> 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

General Specifications	
Optical Isolation	2500 Volt
Wires	1 of 14 AWG, 2 of 18 AWG, 4 of 22 AWG
Operating Environment	0-60°C, Humidity non-condensing 5-95%



PLS Output Specifications		
Feature	EZIO-HSCM1	EZIO-HSCM2
Number of Outputs	2 Source outputs for each counter	4 Source outputs
Response Time	100 μ s	
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	100 μ A @ 50 VDC @ 50°C	
ON Voltage Drop	2 VDC @ 0.5A	
Maximum Inrush Current	0.8A for 10ms	
OFF to ON Response	< 2 μ s	
ON to OFF Response	<10 μ s	
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	

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	5.6K Ω 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	< 2 μ s	
ON to OFF Response	< 3 μ s	
Status Indicators	Red LED for each input	
Commons	1 point	





Pulse Width/Pulse Train Module

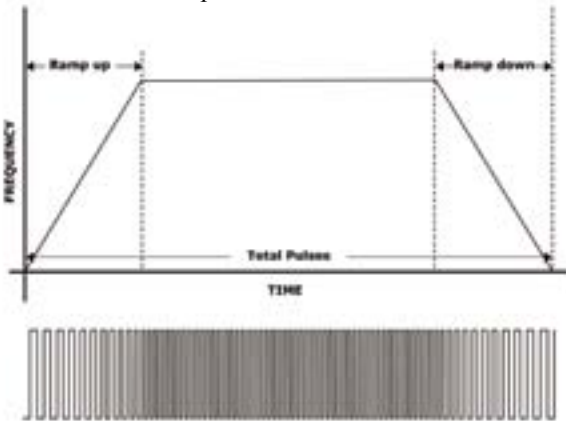
The EZIO-PM module is an intelligent module for use with the EZSeries PLCs and provide either Pulse Train Output (PTO) or Pulse Width Modulator (PWM) outputs. The -P and -N module offer 2 channels of outputs, The -D module offers one channel of differential output. Each channel can be independently programmed 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.



**EZIO-PM-P
EZIO-PM-N
EZIO-PM-D**
€179

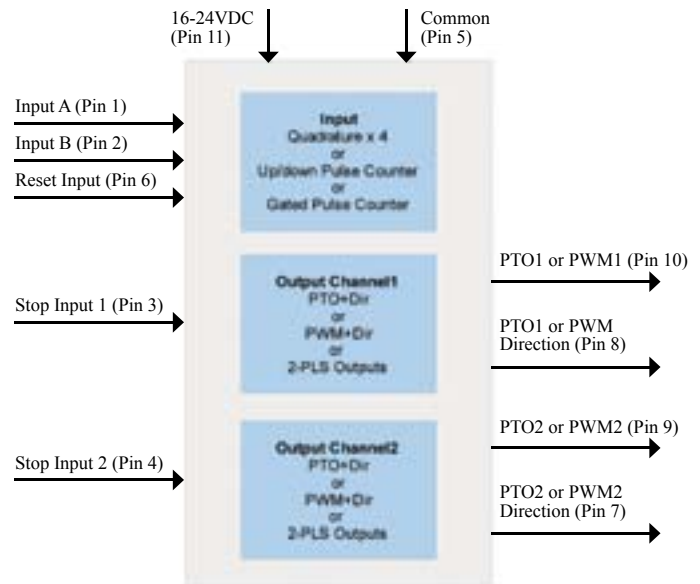
Pulse train Output (PTO) Function

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

EZIO-PM-P / EZIO-PM-N EZIO-PM-D Functional Block Diagram



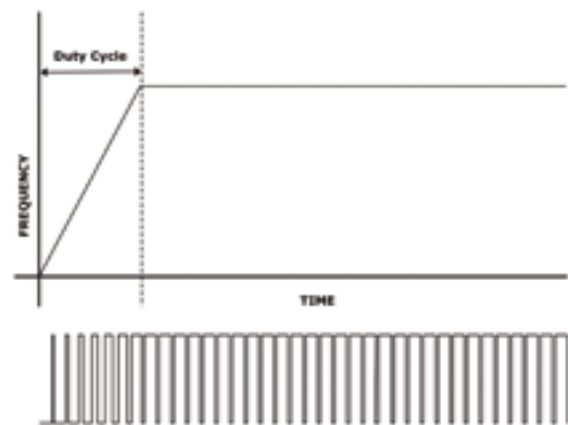
* Differential output module has only one output
* Outputs use ET727 10-30V output chips with 20mA drive and short circuit protection
* Pins 10 & 8 become positive and Pins 9 & 7 become negative terminals in case of differential outputs.

Quadrature Encoder Input

The module also accepts a quadrature input upto a frequency of 100KHz. the count can be multiplied by 2 or 4. 2³² number of counts are allowed. The module allows internal attrt 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.



Pulse Width Modulation