

LED modules provide simple and logical termination for 3-wire sensors or other devices. These modules offer visual LED indication of device input status for quick troubleshooting. The LED/sensor modules are available in 16 and 32-point versions.

Modules mount on 35 mm DIN rail part #DN-R35S1.



ZL-LTB16-24



ZL-LTB32-24

Specifications

Sensor Input Modules	Part #	Pcs/Pkg	Price/Pkg	Part#	Pcs/Pkg	Price/Pkg
	ZL-LTB16-24	1	<--->	ZL-LTB32-24	1	<--->
Description***	16-point, 24 Volt Sensor Input Module with LEDs			32-point, 24 Volt Sensor Input Module with LEDs		
Maximum Voltage	50VAC/VDC (-10%/+20%)					
UL Voltage Rating*	0-30VAC/VDC (-10%/+20%)					
Nominal Current per Input	I/O module max. input current per point plus 2mA for LED indicator					
Maximum Current per Input	500mA					
Maximum Current per Power Group (P1, P2, P3, or P4)	4A					
Surrounding Temperature Range	32 to 140°F (0 to 60°C)					
Approvals	File # E200031 UL, cUL, Class 1, Division 2, Groups A,B,C,D Hazardous Locations, CE, EN 61131-2:2007					
LED Indicator Circuit	2mA @ 24VDC per LED					
Terminal Block Contacts	Copper alloy, tin-lead plated					
Wire Range (Rated Cross Section)**	12-24AWG Solid or Stranded Copper Conductor (2.5mm ²)					
Wire Strip Length	0.24-0.27" (6-7mm)					
Screw Torque	4.4 in-lbs (0.5 Nm)					
Connector Type	Molex Micro-Fit 3.0, 24 pin connector Example: Receptacle 43020-2400 Pins 43031 Series, Male			3M 34000 Series IDC Connector, strain relief is required to latch to header. Example: Socket 3417-7640, Strain relief 3448-3040		
Connecting Cables (Sold Separately)	See Wiring Selection Guides at the beginning of this section. See Connection Cable specifications tables at the end of this section.			See Wiring Selection Guides at the beginning of this section. See Connection Cable specifications tables at the end of this section.		
Dimensions (WxHxD)	4.41" x 3.42" x 2.47" (112mm x 86.8mm x 62.8mm)			8.50" x 3.42" x 2.47" (216mm x 86.8mm x 62.8mm)		
Cable/Wire Clearance	0.5" (12.7mm) Required.					
Mounting Restrictions	None					

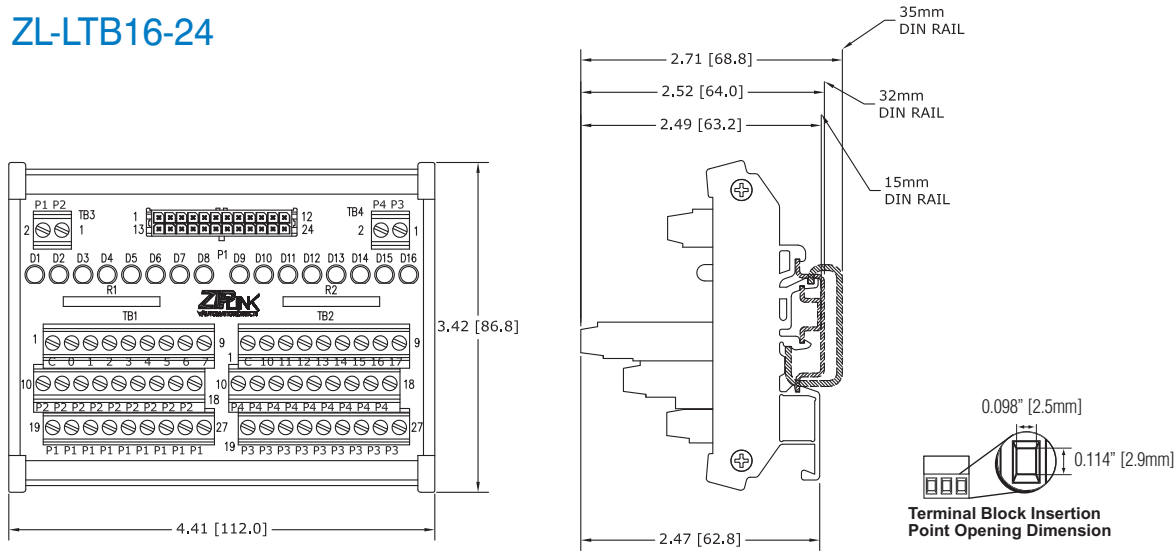
* Use Class 2 power supply.

** Use conductors rated for 60°/75°C for relay outputs.

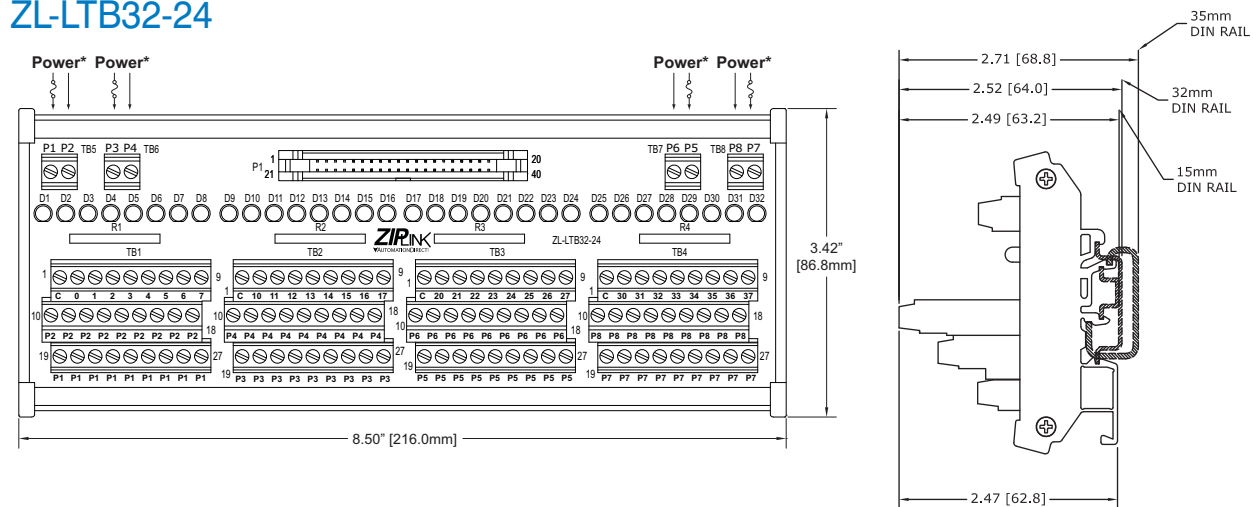
***Connecting cables are for internal wiring only.

Note: See wiring details and dimensional drawings on our Web site at:
<http://www.automationdirect.com/static/manuals/ziplinks/ziplinks.html>

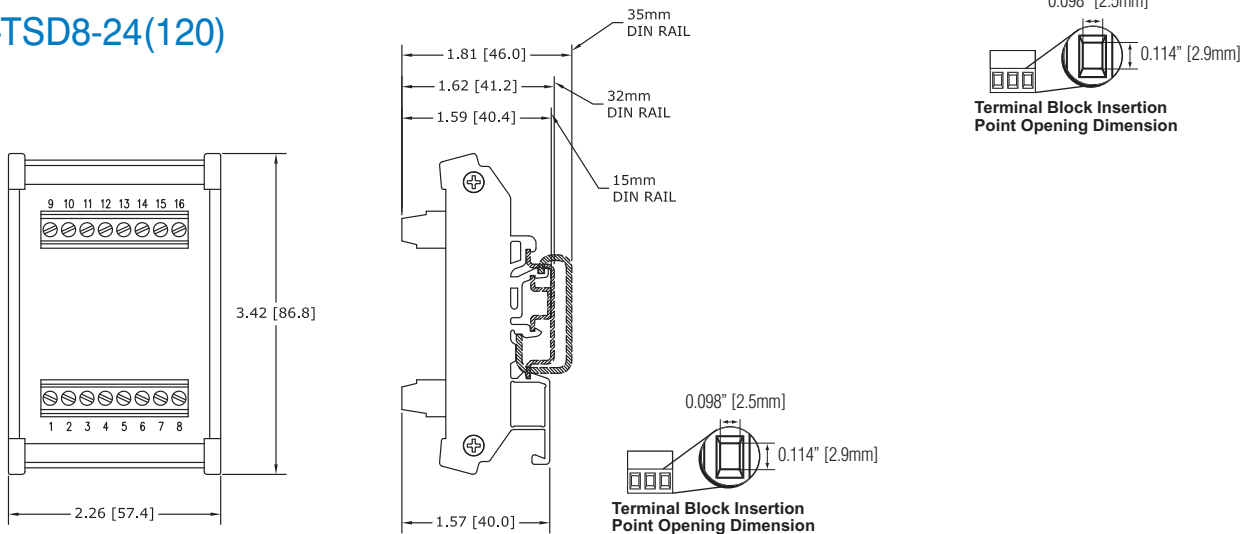
ZL-LTB16-24



ZL-LTB32-24



ZL-TSD8-24(120)



Note: Dimensions shown in Inches [mm]

Step 1	Locate the CLICK CPU module or I/O module part number.
Step 2	Locate compatible connector module type.
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m (Pigtail cables in 1 and 2 meter lengths only)

ZIPLink Wiring System Compatibility Matrix for CLICK PLCs					
Step 2: Connector Module Type		Feedthrough Module	Fuse Module	Relay Modules	Sensor Input Module
Step 1: I/O unit	Number of Terminals	Step 3: Cables			
CPU Module	CO-00DD1-D	20	ZL-CO-CBL20#		
	CO-00DD2-D	20	ZL-CO-CBL20#		
	CO-00DR-D	20	ZL-CO-CBL20#		
	CO-00AR-D	20	ZL-CO-CBL20#		
I/O Module	Inputs				
	CO-08ND3	11	ZL-CO-CBL11#		
	CO-08ND3-1	11	ZL-CO-CBL11#		
	CO-08NA	11	ZL-CO-CBL11#		
	CO-16ND3	20	ZL-CO-CBL20#		ZL-CO-CBL20#
	Outputs				
	CO-08TD1	11	ZL-CO-CBL11#		
	CO-08TD2	11	ZL-CO-CBL11#		
	CO-08TR	11	ZL-CO-CBL11#		
	CO-08TA	11	ZL-CO-CBL11#		
	CO-16TD1	20	ZL-CO-CBL20#	ZL-CO-CBL20#	ZL-CO-CBL20#
	CO-16TD2	20	ZL-CO-CBL20#	ZL-CO-CBL20#	
	CO-04TRS*	20	ZL-CO-CBL20#		

*Note: The CO-04TRS relay output is derated not to exceed 2A per point max. when used with the ZIPLink wiring system

ZIPLink Connector Modules specifications follow the Compatibility Matrix tables.

ZIPLink Cables specifications are at the end of this ZIPLink section.

Step 1	Locate the I/O Module part number.
Step 2	Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1m, -2 = 2m ¹ (Pigtail cables in 1 and 2 meter lengths only)
¹ Note: Cable part number denotes compatibility between Connector Module and I/O Modules.	

DL05/06 PLCs ZIPLink Wiring System Compatibility Matrix						
Step 2: Connector Module Type		Feedthrough Modules	Fuse Modules	Relay Modules	Sensor Input Modules	Pigtail Cable
Step 1: I/O Module	Number of Terminals	ZL-RTB20	ZL-RFU20	ZL-RRL16-24	ZL-LTB16-24	
Step 3: Cables						
Inputs						
DO-10ND3	13	ZL-DO-CBL13#				
DO-10ND3F	13	ZL-DO-CBL13#				
DO-16ND3	24	ZL-DO-CBL24#L			ZL-DO-CBL24#L	ZL-DO-CBL24#P
FO-08NA-1	10	ZL-DO-CBL10#				
Outputs						
DO-10TD1	13	ZL-DO-CBL13#				
DO-16TD1	24	ZL-DO-CBL24#	ZL-DO-CBL24#	ZL-DO-CBL24#		ZL-DO-CBL24#P
DO-10TD2	13	ZL-DO-CBL13#				
DO-16TD2	24	ZL-DO-CBL24#	ZL-DO-CBL24#			ZL-DO-CBL24#P
DO-08TR	10	ZL-DO-CBL10#				
FO-04TRS*	13	ZL-DO-CBL13#				
Combo In/Out						
DO-07CDR	10	ZL-DO-CBL10#				
DO-08CDD1	13	ZL-DO-CBL13#				
Analog						
FO-04AD-1	8	ZL-DO-CBL8#				
FO-04AD-2	8	ZL-DO-CBL8#				
FO-08ADH-1	13	ZL-DO-CBL13#				
FO-08ADH-2	13	ZL-DO-CBL13#				
FO-04DAH-1	13	ZL-DO-CBL13#				
FO-08DAH-1	13	ZL-DO-CBL13#				
FO-04DAH-2	13	ZL-DO-CBL13#				
FO-08DAH-2	13	ZL-DO-CBL13#				
FO-2AD2DA-2	8	ZL-DO-CBL8#				
FO-4AD2DA-1	8	ZL-DO-CBL8#				
FO-4AD2DA-2	8	ZL-DO-CBL8#				
FO-04RTD**						
FO-04THM**						

*Caution: The FO-04TRS relay outputs are derated not to exceed 2 Amps per point when used with the ZIPLink wiring system.

**The F2-04RTD and F2-04THM modules are not supported by the ZIPLink wiring system. These modules require wire specific to the signal type.

ZIPLink Connector Modules specifications follow the Compatibility Matrix tables.

ZIPLink Cables specifications are at the end of this ZIPLink section.

Step 1	Locate the I/O module part number.
Step 2	Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m ¹ (Pigtail cables in 1 and 2 meter lengths only)
¹ Note: Cable part number denotes compatibility between Connector Module and I/O Modules.	

DL205 PLCs ZIPLink Wiring System Compatibility Matrix									
Step 2: Connector Module Type		Feedthrough Modules		Fuse Modules		Relay Modules	Sensor Input Modules		Pigtail Cable
Step 1: I/O Module	Number of Terminals	ZL-RTB20	ZL-RTB40	ZL-RFU20	ZL-RFU40	ZL-RRL16-24	ZL-LTB16-24	ZL-LTB32-24	
Step 3: Cables									
Inputs									
D2-08ND3	10	ZL-D2-CBL10#							
D2-16ND3-2	19	ZL-D2-CBL19#					ZL-D2-CBL19#		ZL-D2-CBL19#P
D2-32ND3	40		ZL-D24-CBL40#					ZL-D24-CBL40#	ZL-D24-CBL40#P
D2-32ND3-2	40		ZL-D24-CBL40#					ZL-D24-CBL40#	ZL-D24-CBL40#P
D2-08NA-1	10	ZL-D2-CBL10#							
D2-08NA-2	10	ZL-D2-CBL10#							
D2-16NA	19	ZL-D2-CBL19#							ZL-D2-CBL19#P
Outputs									
D2-04TD1*	10	ZL-D2-CBL10#							
D2-08TD1	10	ZL-D2-CBL10#							
D2-08TD2	10	ZL-D2-CBL10#							
D2-16TD1-2	19	ZL-D2-CBL19#		ZL-D2-CBL19#		ZL-D2-CBL19#			ZL-D2-CBL19#P
D2-16TD2-2	19	ZL-D2-CBL19#		ZL-D2-CBL19#					ZL-D2-CBL19#P
D2-32TD1	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D2-32TD2	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D2-08TA	10	ZL-D2-CBL10#							
F2-08TA	10	ZL-D2-CBL10#							
D2-12TA	19	ZL-D2-CBL19#		ZL-D2-CBL19#					ZL-D2-CBL19#P
D2-04TRS*	10	ZL-D2-CBL10#							
D2-08TR	10	ZL-D2-CBL10#							
F2-08TRS*	19	ZL-D2-CBL19#							ZL-D2-CBL19#P
F2-08TR**	10	ZL-D2-CBL10#							
D2-12TR	19	ZL-D2-CBL19#		ZL-D2-CBL19#					ZL-D2-CBL19#P
Combo In/Out									
D2-08CDR	10	ZL-D2-CBL10#							
Analog									
F2-04AD-1	10	ZL-D2-CBL10#							
F2-04AD-1L	10	ZL-D2-CBL10#							
F2-08AD-1	10	ZL-D2-CBL10#							
F2-04AD-2	10	ZL-D2-CBL10#							
F2-04AD-2L	10	ZL-D2-CBL10#							
F2-08AD-2	10	ZL-D2-CBL10#							
F2-02DA-1	10	ZL-D2-CBL10#							
F2-02DA-1L	10	ZL-D2-CBL10#							
F2-02DAS-1	10	ZL-D2-CBL10#							
F2-08DA-1	19	ZL-D2-CBL19#							ZL-D2-CBL19#P
F2-02DA-2	10	ZL-D2-CBL10#							
F2-02DA-2L	10	ZL-D2-CBL10#							
F2-02DAS-2	10	ZL-D2-CBL10#							
F2-08DA-2	10	ZL-D2-CBL10#							
F2-4AD2DA	10	ZL-D2-CBL10#							
F2-8AD4DA-1	19	ZL-D2-CBL19#							ZL-D2-CBL19#P
F2-8AD4DA-2	19	ZL-D2-CBL19#							ZL-D2-CBL19#P
F2-04RTD***									
F2-04THM***									

*Caution: The D2-04TD1, D2-04TRS, and F2-08TRS outputs are derated not to exceed 2 Amps per point and 2 Amps per common when used with the ZIPLink wiring system.

**The F2-08TR outputs are derated not to exceed 2 Amps per point and 4 Amps per common when used with the ZIPLink wiring system.

***The F2-04RTD and F2-04THM modules are not supported by the ZIPLink wiring system. These modules require wire specific to the signal type.

ZIPLink Connector Modules specifications follow the Compatibility Matrix tables.

ZIPLink Cables specifications are at the end of this ZIPLink section.

Step 1	Locate the I/O module part number.
Step 2	Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m ¹ (Pigtail cables in 1 and 2 meter lengths only)
¹ Note: Cable part number denotes compatibility between Connector Module and I/O Modules.	

DL305 PLCs ZIPLink Wiring System Compatibility Matrix					
Step 2: Connector Module Type		Feedthrough Modules	Fuse Modules	Relay Modules	Sensor Input Modules
Step 1: I/O Module	Number of Terminals	ZL-RTB20	ZL-RFU20	ZL-RRL16-24	ZL-LTB16-24
		Step 3: Cables			
Inputs					
D3-08ND2*	10				
D3-16ND2-1	18	ZL-D3-CBL18#			
D3-16ND2F	18	ZL-D3-CBL18#			
F3-16ND3F	18	ZL-D3-CBL18#			
D3-08NA-1*	10				
D3-08NA-2*	10				
D3-16NA	18	ZL-D3-CBL18#			
D3-08NE3*	10				
D3-16NE3	18	ZL-D3-CBL18#			ZL-D3-CBL18#
Outputs					
D3-04TD1*	10				
D3-08TD1*	10				
D3-08TD2*	10				
D3-16TD1-1	18	ZL-D3-CBL18#	ZL-D3-CBL18#	ZL-D3-CBL18#	
D3-16TD2	18	ZL-D3-CBL18#	ZL-D3-CBL18#		
D3-04TAS*	10				
F3-08TAS-1	18	ZL-D3-CBL18#			
D3-08TA-1	18	ZL-D3-CBL18#			
D3-08TA-2*	10				
F3-16TA-2	18	ZL-D3-CBL18#	ZL-D3-CBL18#		
D3-16TA-2	18	ZL-D3-CBL18#	ZL-D3-CBL18#		
D3-08TR*	10				
D3-16TR**	18	ZL-D3-CBL18#	ZL-D3-CBL18#		
F3-08TRS-1**	18	ZL-D3-CBL18#			
F3-08TRS-2**	18	ZL-D3-CBL18#			
Analog					
F3-04ADS	18	ZL-D3-CBL18#			
F3-08AD-1	18	ZL-D3-CBL18#			
F3-16AD	18	ZL-D3-CBL18#			
F3-04DA-1	18	ZL-D3-CBL18#			
F3-04DAS	18	ZL-D3-CBL18#			
F3-08THM-J***					
F3-08THM-K***					

*These I/O modules have non-removable terminal blocks which can be terminated using the ZL-CBL24-N cable and the ZL-RTB20 module of the ZIPLink wiring system.

**Caution: The D3-16TR, F3-08TRS-1 and F3-08TRS-2 relay outputs are derated not to exceed 2 Amps per point and 4 Amps per common when used with the ZIPLink wiring system.

***The F3-08THM-J and F3-08THM-K modules are not supported by the ZIPLink wiring system. These modules require wire specific to the signal type.

ZIPLink Connector Modules specifications follow the Compatibility Matrix tables.

ZIPLink Cables specifications are at the end of this ZIPLink section.

Step 1	Locate the I/O module part number.
Step 2	Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m ¹ (Pigtail cables in 1 and 2 meter lengths only)
¹ Note: Cable part number denotes compatibility between Connector Module and I/O Modules.	

DL405 PLCs ZIPLink Wiring System Compatibility Matrix									
I/O Module	Step 2: Connector Module Type	Feedthrough Modules		Fuse Modules		Relay Modules	Sensor Input Modules		Pigtail Cable
	Number of Terminals	ZL-RTB20	ZL-RTB40	ZL-RFU20	ZL-RFU40	ZL-RRL16-24	ZL-LTB16-24	ZL-LTB32-24	
Step 3: Cables									
Inputs									
D4-08ND3S	20	ZL-D4-CBL20#							
D4-16ND2	20	ZL-D4-CBL20#					ZL-D4-CBL20#		
D4-16ND2F	20	ZL-D4-CBL20#					ZL-D4-CBL20#		
D4-32ND3-1	40		ZL-D24-CBL40#					ZL-D24-CBL40#	ZL-D24-CBL40#P
D4-32ND3-2	40		ZL-D24-CBL40#					ZL-D24-CBL40#	ZL-D24-CBL40#P
D4-64ND2*	40		ZL-D24-CBL40#					ZL-D24-CBL40#	ZL-D24-CBL40#P
D4-08NA**	11								
D4-16NA	20	ZL-D4-CBL20#							
D4-16NA-1	20	ZL-D4-CBL20#							
D4-16NE3	20	ZL-D4-CBL20#					ZL-D4-CBL20#		
F4-08NE3S	20	ZL-D4-CBL20#							
Outputs									
D4-08TD1**	11								
F4-08TD1S**	20								
D4-16TD1	20	ZL-D4-CBL20#		ZL-D4-CBL20#					
D4-16TD2	20	ZL-D4-CBL20#		ZL-D4-CBL20#					
D4-32TD1	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D4-32TD1-1	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D4-32TD2	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D4-64TD1*	40		ZL-D24-CBL40#		ZL-D24-CBL40#				ZL-D24-CBL40#P
D4-08TA**	11								
D4-16TA	20	ZL-D4-CBL20#		ZL-D4-CBL20#					
D4-08TR**	11								
F4-08TRS-1****	20	ZL-D4-CBL20#							
F4-08TRS-2****	20	ZL-D4-CBL20#							
D4-16TR***	20	ZL-D4-CBL20#		ZL-D4-CBL20#					
Analog									
F4-04AD	20	ZL-D4-CBL20#							
F4-04ADS	20	ZL-D4-CBL20#							
F4-08AD	20	ZL-D4-CBL20#							
F4-16AD-1	20	ZL-D4-CBL20#							
F4-16AD-2	20	ZL-D4-CBL20#							
F4-04DA-1	20	ZL-D4-CBL20#							
F4-04DA-2	20	ZL-D4-CBL20#							
F4-08DA-1	20	ZL-D4-CBL20#							
F4-16DA-1	20	ZL-D4-CBL20#							
F4-08DA-2	20	ZL-D4-CBL20#							
F4-16DA-2	20	ZL-D4-CBL20#							
F4-04DAS-1	20	ZL-D4-CBL20#							
F4-04DAS-2	20	ZL-D4-CBL20#							
F4-08THM**	21								
F4-08THM-n**	21								
F4-08RTD**	20								

*The D4-64ND2 and D4-64TD1 modules have two 32-point connectors and require 2 ZIPLink cables and 2 ZIPLink connector modules.

**These modules are not supported by the ZIPLink wiring system.

***Caution: The D4-16TR relay outputs are derated not to exceed 2 Amps per point and 4 Amps per common when used with the ZIPLink wiring system.

****The F4-08TRS-1 and F4-08TRS-2 are derated not to exceed 2 Amps per point and 2 Amps per common when used with the ZIPLink wiring system.

ZIPLink Connector Modules specifications follow the Compatibility Matrix tables.

ZIPLink Cables specifications are at the end of this ZIPLink section.

Step 1	Locate the I/O module part number.
Step 2	Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)
Step 3	Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m ¹ (Pigtail cables in 1 and 2 meter lengths only)
¹ Note: Cable part number denotes compatibility between Connector Module and I/O Modules.	

ZIPLink Wiring System Compatibility Matrix for Productivity3000									
Step 2: Connector Module Type		Feedthrough Modules		Fuse Modules		Relay Modules	Sensor Input Modules		Pigtail Cable
Step 1: I/O Module	Number of Terminals	ZL-RTB20	ZL-RTB40	ZL-RFU20	ZL-RFU40	ZL-RRL16-24	ZL-LTB16-24	ZL-LTB32-24	
Step 3: Cables									
Inputs									
P3-08NAS	20	ZL-P3-CBL20#							ZL-P3-CBL20-#P
P3-08ND3S	20	ZL-P3-CBL20#							ZL-P3-CBL20-#P
P3-16NA	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-16ND3	20	ZL-P3-CBL20-#L					ZL-P3-CBL20-#L		ZL-P3-CBL20-#P
P3-32ND3	40		ZL-CBL40#					ZL-CBL40#	
P3-64ND3*	40		ZL-CBL40#					ZL-CBL40#	
Outputs									
P3-08TAS	20	ZL-P3-CBL20#							ZL-P3-CBL20-#P
P3-08TD1S	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08TD2S	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08TRS	20	ZL-P3-CBL20#							ZL-P3-CBL20-#P
P3-16TA	20	ZL-P3-CBL20#		ZL-P3-CBL20-#L					ZL-P3-CBL20-#P
P3-16TD1	20	ZL-P3-CBL20#		ZL-P3-CBL20#		ZL-P3-CBL20#			ZL-P3-CBL20-#P
P3-16TD2	20	ZL-P3-CBL20#		ZL-P3-CBL20#					ZL-P3-CBL20-#P
P3-16TR	20	ZL-P3-CBL20#		ZL-P3-CBL20#					ZL-P3-CBL20-#P
P3-08TRS-1***	20	ZL-P3-CBL20#		ZL-P3-CBL20#					ZL-P3-CBL20-#P
P3-32TD1	40		ZL-CBL40#		ZL-CBL40#				
P3-32TD2	40		ZL-CBL40#		ZL-CBL40#				
P3-64TD1*	40		ZL-CBL40#		ZL-CBL40#				
P3-64TD2*	40		ZL-CBL40#		ZL-CBL40#				
Analog In									
P3-04ADS	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08AD	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-16AD-1	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-16AD-2	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08RTD**	Matched Only								
P3-08THM**	T/C Wire Only								
Analog Out									
P3-04DA	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08DA-1	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-08DA-2	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-06DAS-1	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-06DAS-2	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-16DA-1	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-16DA-2	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
Analog Combo									
P3-8AD4DA-1	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P
P3-8AD4DA-2	20	ZL-P3-CBL20-#L							ZL-P3-CBL20-#P

*The P3-64ND3, P3-64TD1, and P3-64TD2 modules have two 32-point connectors and require 2 ZIPLink cables and 2 ZIPLink connector modules.

**These modules are not supported by the ZIPLink wiring system.

***The P3-08TRS-1 output module is derated, not to exceed 2A per point maximum when used with the ZIPLink wiring system.