ControlLogix system cabling

User manual

UM EN ControlLogix system cabling

User manual
ControlLogix system cabling

UM EN ControlLogix system cabling, Revision A 2023-07-11

This user manual is valid for:

Designation	Item No.
VIP-PA-PWR/36XOE/ 1,0M/1756	2908859
VIP-PA-PWR/36XOE/ 2,0M/1756	2908860
VIP-PA-PWR/36XOE/ 4,0M/1756	2908861
VIP-PA-PWR/36XOE/ 6,0M/1756	2908862
VIP-PA-PWR/20XOE/ 1,0M/1756	2908863
VIP-PA-PWR/20XOE/ 2,0M/1756	2908864
VIP-PA-PWR/20XOE/ 4,0M/1756	2908865
VIP-PA-PWR/20XOE/ 6,0M/1756	2908866
VIP-PA-50/26/ 1,0M/1756/020	1162419
VIP-PA-50/26/ 2,0M/1756/020	1162441
VIP-PA-50/26/ 4,0M/1756/020	1162442
VIP-PA-50/26/ 6,0M/1756/020	1162446
VIP-PA-50/26/ 1,0M/1756/021	1162448
VIP-PA-50/26/ 2,0M/1756/021	1162450
VIP-PA-50/26/ 4,0M/1756/021	1162452
VIP-PA-50/26/ 6,0M/1756/021	1162453
VIP-PA-50/26/ 1,0M/1756/022	1162454
VIP-PA-50/26/ 2,0M/1756/022	1162455
VIP-PA-50/26/ 4,0M/1756/022	1162477
VIP-PA-50/26/ 6,0M/1756/022	1162478
VIP-PA-50/26/ 1,0M/1756/023	1162480
VIP-PA-50/26/ 2,0M/1756/023	1162481
VIP-PA-50/26/ 4,0M/1756/023	1162485
VIP-PA-50/26/ 6,0M/1756/023	1162486
VIP-PA-50/26/ 1,0M/1756/024	1162492

4176_en_A

Designation	Item No.
VIP-PA-50/26/ 2,0M/1756/024	1162494
VIP-PA-50/26/ 4,0M/1756/024	1162495
VIP-PA-50/26/ 6,0M/1756/024	1162497
VIP-PA-2X14/26/ 1,0M/1756/060	1162528
VIP-PA-2X14/26/ 2,0M/1756/060	1162532
VIP-PA-2X14/26/ 4,0M/1756/060	1162557
VIP-PA-2X14/26/ 6,0M/1756/060	1162576
VIP-PA-2X14/26/ 1,0M/1756/061	1162578
VIP-PA-2X14/26/ 2,0M/1756/061	1162581
VIP-PA-2X14/26/ 4,0M/1756/061	1162586
VIP-PA-2X14/26/ 6,0M/1756/061	1162588
VIP-PA-2X14/26/ 1,0M/1756/062	1162592
VIP-PA-2X14/26/ 2,0M/1756/062	1162593
VIP-PA-2X14/26/ 4,0M/1756/062	1162595
VIP-PA-2X14/26/ 6,0M/1756/062	1162600
VIP-PA-2X14/26/ 1,0M/1756/063	1162601
VIP-PA-2X14/26/ 2,0M/1756/063	1162603
VIP-PA-2X14/26/ 4,0M/1756/063	1162605
VIP-PA-2X14/26/ 6,0M/1756/063	1162608
VIP-PA-2X14/26/ 1,0M/1756/064	1162328
VIP-PA-2X14/26/ 2,0M/1756/064	1162417
VIP-PA-2X14/26/ 4,0M/1756/064	1162418
VIP-PA-2X14/26/ 6,0M/1756/064	1162632
VIP-PA-4X14/26/ 1,0M/1756/040	1162498
VIP-PA-4X14/26/ 2,0M/1756/040	1162499
VIP-PA-4X14/26/ 4,0M/1756/040	1162501
VIP-PA-4X14/26/ 6,0M/1756/040	1162504
VIP-PA-4X14/26/ 1,0M/1756/041	1162506
VIP-PA-4X14/26/ 2,0M/1756/041	1162507
VIP-PA-4X14/26/ 4,0M/1756/041	1162509
VIP-PA-4X14/26/ 6,0M/1756/041	1162527
VIP-2/SC/FLK50/PLC	2315227
VIP-2/PT/FLK50/PLC	2903803
VIP-2/SC/FLK14/PLC	2315214
VIP-2/PT/FLK14/PLC	2903801
VIP-2/SC/FLK14/LED/PLC	2322249

Designation	Item No.
VIP-2/PT/FLK14/LED/PLC	2904279
VIP-2/SC/FLK50/LED/PLC	2322252
VIP-2/PT/FLK50/LED/PLC	2904280
VIP-2/SC/FLK14/8M/PLC	2322281
VIP-2/PT/FLK14/8M/PLC	2904283
VIP-2/SC/FLK14/8P/PLC	2322294
VIP-2/PT/FLK14/8P/PLC	2904284
VIP-2/SC/PDM-2/16	2315256
VIP-3/PT/PDM-2/16	2903797
VIP-2/SC/PDM-2/32	2315272
VIP-3/PT/PDM-2/32	2903799
VFC-PT/FLK14/PLC	1278798
FLKM 14/KDS3-MT/PPA/PLC	2290423
FLKM 50/KDS3-MT/PPA/PLC	2290614
PLC-V8/FLK14/IN	2296553
PLC-V8/FLK14/OUT	2295554
PLC-V8L/FLK14/OUT	2299660
RIF-1-V8/PT/FLK14/OUT	2905195
KME	0807083
SF-SL 1,0X5,5-150	1212552
ZBF10:UNBEDRUCKT	0809997
UC-TMF 10	0818124
UCT-TMF 10	0829204

Table of contents

1 For your safety 7
1.1 Labeling of warning notes 7
1.2 Qualification of users 7
1.3 Field of application of the product 7
1.3.1 Intended use 7
1.3.2 Foreseeable misuse 7
1.3.3 Product changes 7
1.4 Safety notes 8

2 Portolio description 9
2.1 Product advantages 9
2.1.1 Open-end adapter cables 9
2.1.2 Connectorized adapter cables 9
2.2 Accessories 10
2.2.1 Marking for the cable adapter 10
2.2.2 Other accessories for the adapter cables 10
2.2.3 Accessories for the field devices 10
2.3 Module-to-cable cross-references 11

3 Mounting and installation 15

4 Application notes 17
4.1 VIP-PA-PWR/36XOE/…/1756 17
4.1.1 Description 17
4.2 VIP-PA-PWR/20XOE/…/1756 19
4.2.1 Description 19
4.3 VIP-PA-50/26/…/1756/020 20
4.3.1 Description 20
4.3.2 Technical data 22
4.4 VIP-PA-50/26/…/1756/021 23
4.4.1 Description 23
4.4.2 Wiring illustration 26
4.4.3 Technical data 27
4.5 VIP-PA-50/26/…/1756/022 28
4.5.1 Description 28
4.5.2 Technical data 33
4.6 VIP-PA-50/26/…/1756/023 35
4.6.1 Description 35
4.6.2 Technical data 36

4.7 VIP-PA-50/26/…/1756/024 37
4.7.1 Description 37
4.7.2 Wiring illustration 39
4.7.3 Technical data 40
4.8 VIP-PA-2X14/26/…/1756/060 41
4.8.1 Description 41
4.8.2 Wiring chart 42
4.8.3 Technical data 46
4.9 VIP-PA-2X14/26/…/1756/061 47
4.9.1 Description 47
4.9.2 Wiring chart 48
4.9.3 Wiring illustrations 49
4.9.4 Technical data 52
4.10 VIP-PA-2X14/26/…/1756/062 53
4.10.1 Description 53
4.10.2 Wiring chart 54
4.10.3 Wiring illustrations 56
4.10.4 Technical data 61
4.11 VIP-PA-2X14/26/…/1756/063 62
4.11.1 Description 62
4.11.2 Wiring chart 63
4.11.3 Wiring illustrations 65
4.11.4 Technical data 70
4.12 VIP-PA-2X14/26/…/1756/064 71
4.12.1 Description 71
4.12.2 Wiring chart 72
4.12.3 Technical data 73
4.13 VIP-PA-4X14/26/…/1756/040 74
4.13.1 Description 74
4.13.2 Technical data 82
4.14 VIP-PA-4X14/26/…/1756/041 83
4.14.1 Description 83
4.14.2 Technical data 96

A Appendixes 97
A 1 List of figures 97
A 2 List of tables 99

1 For your safety

Read this manual carefully and keep it for future reference.

1.1 Labeling of warning notes

This symbol indicates hazards that could lead to personal injury.

There are three signal words indicating the severity of a potential injury.

DANGER
Indicates a hazard with a high risk level. If this hazardous situation is not avoided, it will result in death or serious injury.

WARNING
Indicates a hazard with a medium risk level. If this hazardous situation is not avoided, it could result in death or serious injury.

CAUTION
Indicates a hazard with a low risk level. If this hazardous situation is not avoided, it could result in minor or moderate injury.

This symbol together with the **NOTE** signal word warns the reader of actions that might cause property damage or a malfunction.

Here you will find additional information or detailed sources of information.

1.2 Qualification of users

The use of products described in this manual is oriented exclusively to electrically skilled persons or persons instructed by them. The users must be familiar with the relevant safety concepts of automation technology as well as applicable standards and other regulations.

1.3 Field of application of the product

1.3.1 Intended use

ControlLogix is a registered trademark of Rockwell Automation, Inc.

1.3.2 Foreseeable misuse

1.3.3 Product changes

Changes or modifications to hardware and software of the device are not permitted.

Incorrect operation or modifications to the device can endanger your safety or damage the device. Do not repair the device yourself. If the device is defective, please contact Phoenix Contact.

1.4 Safety notes

WARNING:
Do not connect or disconnect equipment unless power has been removed or the area is known to be non-hazardous.

These devices may only be commissioned, installed, modified, or upgraded by an electrically skilled person.

Observe the installation instructions as described.

When installing and operating the device, the applicable regulations and safety directives (including national safety directives), as well as general technical regulations, must be observed. The technical and safety data is provided on the documents and certificates (conformity assessment, additional approvals where applicable) of the various products.

Do not open or make changes to the device.

Do not repair the device yourself; replace it with an equivalent device. Repairs may only be performed by the manufacturer. The manufacturer is not liable for damage resulting from non-compliance.

The IP20 degree of protection (IEC/EN 60529) is intended for a clean and dry environment. Do not expose the device to any mechanical or thermal influences which exceed the limits described.

The equipment must be installed in a suitable enclosure with a tool-removable cover or door.

The products are suitable for use in Class I, Div. 2, Groups A, B, C, and D hazardous locations or nonhazardous locations.

2 Portolio description

2.1 Product advantages

The front adapter cables specified in this manual can be connected directly to applicable ControlLogix series 1756 I/O modules and are available in 1, 2, 4, and 6-meter lengths. All adapter cables have the following features:

– integrated slot for locking I/O module to the adapter
– lever to aid in removal of the adapter for maintenance
– slots on the adapter for marking
– pre-tested and ready for installation

Figure 2-1 Portfolio overview

Open-end lead | 1x 50 pos. FLKM | 2x 14 pos. FLKM | 4x 14 pos. FLKM

2.1.1 Open-end adapter cables

Open-end variants, consisting of 20 and-36 position options have ferruled and marked leads ready for field connection. Each cable has an integrated shield drain wire.

A host of field-level components ranging from terminal blocks to signal conditioners can be wired to the cable adapters. See phoenixcontact.com for the full range of options.

2.1.2 Connectorized adapter cables

Connectorized variants are offered in the following configurations:

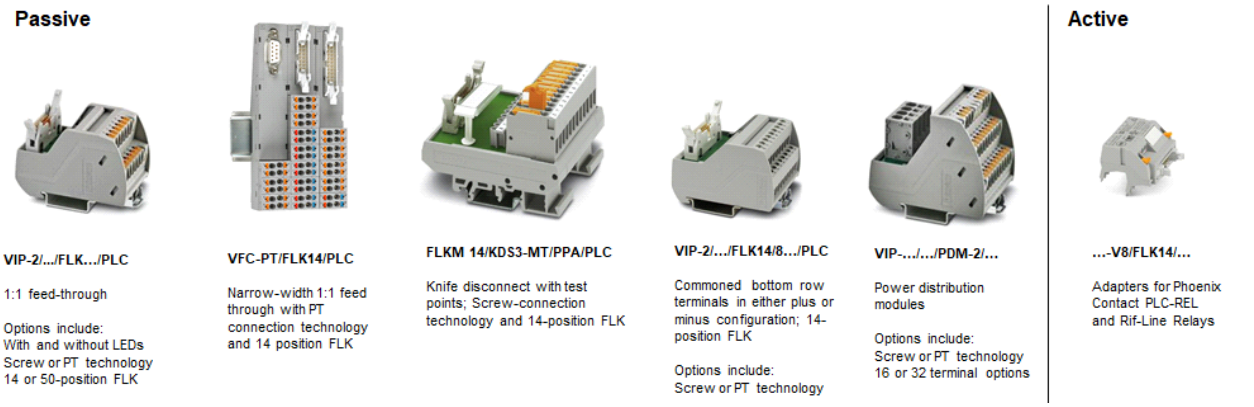
– Adapter, one cable with a 50-position FLK connector (1 x 50)
– Adapter, two cables, each with a 14-position FLK connector (2 x 14)
– Adapter, four cables, each with a 14-position FLK connector (4 x 14)

Each family connects to specific I/O modules. Depending on the I/O type, terminals for power, returns, or Cold Junction Compensation (CJC) may be integrated into the adapter. FK-MCP terminals with push-in connection technology are marked and installed in the adapter for these variants.

Analog variants have shield-drain wires.

This portfolio provides both passive and active field termination options.

Figure 2-2 Field termination overview



The application section of this guide provides standard wiring charts for each applicable I/O module. For select I/O modules, higher current ratings can be achieved with alternative wiring conventions. Wiring illustrations are provided for guidance.

2.2 Accessories

2.2.1 Marking for the cable adapter

Two marking grooves are available on the face of each cable adapter. The grooves are compatible with standard “Zack Marker strip” (labels) of the ZBF10 … product family. The ZBF10… marker strips may be printed and snap into the adapter marking grooves as desired.

2.2.2 Other accessories for the adapter cables

KME marker carriers are available to manage and mark individual cables.

An optional screwdriver, SF-SL 1,0X5,5-150, is available to aid in actuating the removal lever in cases where the cable adapter is removed from the I/O module.

2.2.3 Accessories for the field devices

Additional accessories for all field termination modules can be found at phoenixcontact.com.

2.3 Module-to-cable cross-references

Table 2-1 shows the recommended cables for the different ControlLogix I/O modules. Table 2-2 shows recommended cables with 36-position terminated cables. Table 2-3 shows recommended cables with 20-position terminated cables.

Table 2-1 ControlLogix modules to open-end cables cross list

Phoenix Contact adapter cable		ControlLogix 1756 I/O modules						
20 pos.	VIP-PA-PWR/ 20XOE/…/1756	CFM	IC16	IV16	OA8D	OB8	OF8	ON8
		IA16	IG16	OA16	OA8E	OC8	OF8H	OV16E
		IA8D	IN16	OA8	OB16E	OF4	OG16	PLS
		IB16						
36 pos.	VIP-PA-PWR/ 36XOE/…/1756	HSC	IB16ISOE	IF8H	IR12	OB16D	OB8EI	OX8I
		IA16I	IB32	IF8I	IRT8I	OB16I	OF8I	
		IA32	IF16	IF8IH	IT16	OB16IEF	OF8IH	
		IB16D	IF16H	IH16I	IV32	OB16IEFS	OH8I	
		IB16I	IF4FXOF2F	IH16ISOE	LSC8XIB8I	OB16IS	OV32E	
		IB16IF	IF8	IM16I	OA16I	OB32	OW16I	

Table 2-2 High-density ControlLogix modules cables cross list

		ControlLogix 1756 I/O modules						
		IB16D	OB16D	IF16	IF8I	IRT8I	IB32	OB32
		IB16I		IF16H	OF8I			OV32E
		OB16I		IF8				
		IB16IF						
		IB16ISOE						
		OB16IEF						
		OB16IEFS						
		OB16IS						
Phoenix Contact adapter cable								
36 pos. 1x FLK50	VIP-PA-50/26/…/ 1756/020	X						
	VIP-PA-50/26/…/ 1756/021		X					
	VIP-PA-50/26/…/ 1756/022			X				
	VIP-PA-50/26/…/ 1756/023				X			
	VIP-PA-50/26/…/ 1756/024					X		
36 pos. 4x FLK14	VIP-PA-50/26/…/ 1756/040						X	
	VIP-PA-50/26/…/ 1756/041							X
Phoenix Contact VARIOFACE termination board options								
FLK50	VIP-2/…/FLK50/PLC	X	X	X	X	X		
	FLKM 50/KDS3-MT/PPA/PLC	X	X	X	X	X		
FLK14	VIP-2/…FLK14/PLC						X	X
	VIP-2/…/ FLK14/LED/PLC							X
	VFC-PT/FLK14/PLC						X	X
	FLKM 14/KDS3-MT/PPA/PLC						X	X
	VIP-2/…/ FLK14/8M/PLC							X
	VIP-2/…/ FLK14/8P/PLC						X	

Table 2-2 High-density ControlLogix modules cables cross list [...]

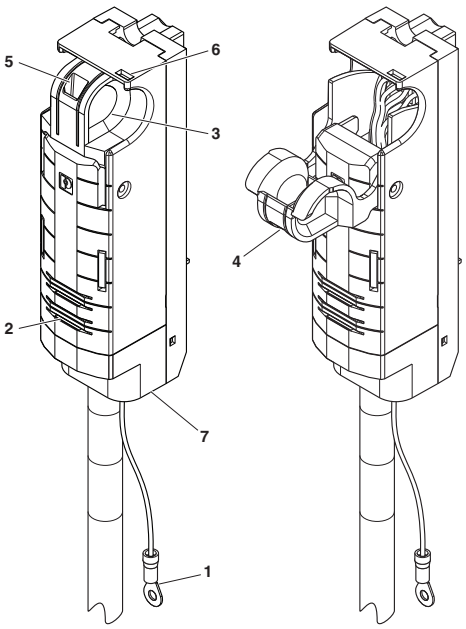
Phoenix Contact power distribution module options								
Power distribu-tion	VIP-2/SC/PDM-2/16		X					
	VIP-…/…/PDM-2/32							X
Phoenix Contact PLC-V8 and RIF-1-V8 adapter options								
Input	PLC-V8/FLK14/IN						X	
Output	PLC-V8/FLK14/OUT							X
	PLC-V8L/FLK14/OUT							X
	RIF-1-V8/PT/ FLK14/OUT							X

Table 2-3 Low-density ControlLogix modules cables cross list

		ControlLogix 1756 I/O modules						
		OA8	OB8	IA16	IB16	OA16	OB16E	OF8
				IC16				OF8H
				IN16				
Phoenix Contact cable adapters								
20 pos. 2x FLK14	VIP-PA-2X14/ 26/…/1756/060	X						
	VIP-PA-2X14/ 26/…/1756/061		X					
	VIP-PA-2X14/ 26/…/1756/062			X	X			
	VIP-PA-2X14/ 26/…/1756/063					X	X	
	VIP-PA-2X14/ 26/…/1756/064							X
Phoenix Contact VARIOFACE termination board options								
FLK14	VIP-2/…/FLK14/PLC	X	X	X	X	X	X	X
	VIP-2/…/FLK14 /LED/PLC				X		X	
	VFC-PT/FLK14/PLC	X	X	X	X	X	X	X
	FLKM 14/KDS3-MT/PPA/PLC	X	X	X	X	X	X	X
	VIP-2/…/FLK14/ 8M/PLC	X	X			X	X	X
	VIP-2/…/FLK14/ 8P/PLC			X	X			
Phoenix Contact power distribution module options								
Power distribu-tion	VIP-…/…/PDM-2/16	X	X	X	X	X	X	
Phoenix Contact PLC-V8 and RIF-1-V8 adapter options								
Input	PLC-V8/FLK14/IN				X			
Output	PLC-V8/FLK14/OUT						X	
	PLC-V8L/FLK14/OUT						X	
	RIF-1-V8/PT/ FLK14/OUT						X	

3 Mounting and installation

Figure 3-1 Typical adapter attributes



1 Shield drain with ring lug
2 Marker slots
3 Removal lever - closed
4 Removal lever - open
5 Screwdriver slot
6 Slot for locking tab
7 Pluggable terminals (power, returns, or CJC)

Figure 3-1 provides an overall view and key characteristics of the cable adapter.

Not all cable adapters have all attributes.

To install the front adapter onto the I/O module:

The front adapters can be plugged onto corresponding I/O modules and secured by pushing the locking tab on the I/O module downward.

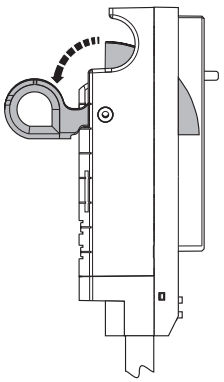
Marker slots are provided on the front adapter for optional I/O identification.

To remove the front adapter from the I/O module, slide the locking tab up on the I/O module and rotate the front adapter removal lever down.

To remove the front adapter from the I/O module:

1. Slide the locking tab up on the I/O module and rotate the front adapter removal lever down.
2. Rotate the lever, either by hand or using the integrated screw-driver slot.

Figure 3-2 Side view showing lever in the disconnect position



3. Remove the adapter

4 Application notes

4.1 VIP-PA-PWR/36XOE/…/1756

4.1.1 Description

VIP-PA-PWR/36XOE/…/1756 front adapter cables can connect directly to ControlLogix I/O modules. The front adapters connect up to 32 channels of the controller via a 1:1 system cable. Terminal blocks and devices with a variety of functions are available for connection to the field level via ferruled and marked open leads. The front adapters can be used with 36-position I/O modules whose switching voltage does not exceed 250 V and 4 A per single wire.

Table 2-1 details applicable ControlLogix 1756 I/O modules that can interface to this cable adapter family.

Table 4-1 provides field termination details.

Table 4-1 Field termination wiring - VIP-PA-PWR/36XOE/…/1756 to open end

A-B pin	Color	Color Abbreviation (IEC 60757)	Label
1	Black	BK	1
2	Brown	BN	2
3	Red	RD	3
4	Orange	OG	4
5	Yellow	YE	5
6	Green	GN	6
7	Blue	BU	7
8	Violet	VT	8
9	Gray	GY	9
10	White	WH	10
11	White/Black	WH/BK	11
12	White/Brown	WH/BN	12
13	White/Red	WH/RD	13
14	White/Orange	WH/OG	14
15	White/Yellow	WH/YE	15
16	White/Green	WH/GN	16
17	White/Blue	WH/BU	17
18	White/Violet	WH/VT	18
19	White/Gray	WH/GY	19
20	Brown/Black	BN/BK	20
21	Brown/Red	BN/RD	21
22	Brown/Orange	BN/OG	22
23	Brown/Yellow	BN/YE	23

Table 4-1 Field termination wiring - VIP-PA-PWR/36XOE/…/1756 to open end

A-B pin	Color	Color Abbreviation (IEC 60757)	Label
24	Brown/Green	BN/GN	24
25	Brown/Blue	BN/BU	25
26	Brown/Violet	BN/VT	26
27	Brown/Gray	BN/GY	27
28	Brown/White	BN/WH	28
29	Green/Black	GN/BK	29
30	Green/Brown	GN/BN	30
31	Green/Red	GN/RD	31
32	Green/Orange	GN/OG	32
33	Green/Blue	GN/BU	33
34	Green/Violet	GN/VT	34
35	Green/Gray	GN/GY	35
36	Green/White	GN/WH	36

Technical data

Supply	
Maximum permissible operating voltage	250 VAC/DC
Max. permissible current	
Per single wire at 60°C	3 A
Per single wire at 40°C	4 A
Connection data	
Corresponding control	ControlLogix
General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Degree of protection	IP20
Air clearances and creepage distances	UL 61010-2-201

4.2 VIP-PA-PWR/20XOE/…/1756

4.2.1 Description

VIP-PA-PWR/20XOE/…/1756 front adapter cables can connect directly to ControlLogix I/O modules. The front adapters connect up to 16 channels of the controller via a 1:1 system cable. Terminal blocks and devices with a variety of functions are available for connection to the field level via ferruled and marked open leads. The front adapters can be used with 20-position I/O modules whose switching voltage does not exceed 250 V and 4 A per single wire.

Table 2-1 details applicable ControlLogix 1756 I/O modules that can interface to this cable adapter family.

Table 4-2 provides field termination details.

Table 4-2 Field termination wiring - VIP-PA-PWR/20XOE/…/1756 to open end

A-B pin	Color	Color Abbreviation (IEC 60757)	Label
1	Black	BK	1
2	Brown	BN	2
3	Red	RD	3
4	Orange	OG	4
5	Yellow	YE	5
6	Green	GN	6
7	Blue	BU	7
8	Violet	VT	8
9	Gray	GY	9
10	White	WH	10
11	White/Black	WH/BK	11
12	White/Brown	WH/BN	12
13	White/Red	WH/RD	13
14	White/Orange	WH/OG	14
15	White/Yellow	WH/YE	15
16	White/Green	WH/GN	16
17	White/Blue	WH/BU	17
18	White/Violet	WH/VT	18
19	White/Gray	WH/GY	19
20	Brown/Black	BN/BK	20

Table 4-1 provides field termination details.

4.3 VIP-PA-50/26/…/1756/020

4.3.1 Description

VIP-PA-50/26/…/1756/020 adapter cables connect up to 16 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 50-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can interface to this cable adapter family.

Table 4-4 provides field termination details.

Table 4-3 Field termination for VIP-PA-50/26/…/1756/020 cables

ControlLogix					Phoenix Contact	
A-B I/O point reference	**A-B pin**	**IB16D**	**IB16I, IB16IF, IB16ISOE**	**OB16I, OB16IEF, OB16IEFS, OB16IS**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking			**Terminal marking**	
I/O point 0	1	IN-0	IN-0	OUT-0	0.0	Byte 0
	2	GND-0	GND-0	DC-0+	0.1	
I/O point 1	3	IN-1	IN-1	OUT-1	0.2	
	4	GND-0	GND-1	DC-1+	0.3	
I/O point 2	5	IN-2	IN-2	OUT-2	0.4	
	6	GND-0	GND-2	DC-2+	0.5	
I/O point 3	7	IN-3	IN-3	OUT-3	0.6	
	8	GND-0	GND-3	DC-3+	0.7	
I/O point 4	9	IN-4	IN-4	OUT-4	1.0	Byte 1
	10	GND-1	GND-4	DC-4+	1.1	
I/O point 5	11	IN-5	IN-5	OUT-5	1.2	
	12	GND-1	GND-5	DC-5+	1.3	
I/O point 6	13	IN-6	IN-6	OUT-6	1.4	
	14	GND-1	GND-6	DC-6+	1.5	
I/O point 7	15	IN-7	IN-7	OUT-7	1.6	
	16	GND-1	GND-7	DC-7+	1.7	
I/O point 8	17	IN-8	IN-8	OUT-8	2.0	Byte 2
	18	GND-2	GND-8	DC-8+	2.1	
I/O point 9	19	IN-9	IN-9	OUT-9	2.2	
	20	GND-2	GND-9	DC-9+	2.3	
I/O point 10	21	IN-10	IN-10	OUT-10	2.4	
	22	GND-2	GND-10	DC-10+	2.5	
I/O point 11	23	IN-11	IN-11	OUT-11	2.6	
	24	GND-2	GND-11	DC-11+	2.7	

Table 4-3 Field termination for VIP-PA-50/26/…/1756/020 cables [...]

ControlLogix					Phoenix Contact	
A-B I/O point reference	**A-B pin**	**IB16D**	**IB16I, IB16IF, IB16ISOE**	**OB16I, OB16IEF, OB16IEFS, OB16IS**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking			**Terminal marking**	
I/O point 12	25	IN-12	IN-12	OUT-12	3.0	Byte 3
	26	GND-3	GND-12	DC-12+	3.1	
I/O point 13	27	IN-13	IN-13	OUT-13	3.2	
	28	GND-3	GND-13	DC-13+	3.3	
I/O point 14	29	IN-14	IN-14	OUT-14	3.4	
	30	GND-3	GND-14	DC-14+	3.5	
I/O point 15	31	IN-15	IN-15	OUT-15	3.6	
	32	GND-3	GND-15	DC-15+	3.7	
	34	GND-3	GND-15	DC-15+	3.7	

4.3.2 Technical data

Supply	
Maximum permissible operating voltage	25 V AC 60 V DC
Max. permissible current, per path	1 A
External cable diameter	10.3 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	1
Pitch	2.54 mm
Number of positions	50

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Air clearances and creepage distances	UL 61010-2-201
Standards/regulations	UL 61010-2-201

4.4 VIP-PA-50/26/…/1756/021

4.4.1 Description

VIP-PA-50/26/…/1756/021 adapter cables connect up to 16 channels of ControlLogix 1756 I/O whose switching voltage does not exceed 30 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 50-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can be connected to this cable adapter family, along with field termination options for connection to the field level.

Table 4-6 provides guidance on field termination wiring.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0-7) and 1+,1- (I/O points 8-15), if not connected on the field termination board. A maximum current of 8 A per group can be achieved when wired directly to the adapter.

Figure 4-1 details a specific wiring option based on a configuration to yield maximum power via use of a VIP Power Distribution Module (PDM).

Table 4-4 Field termination for VIP-PA-50/26/…/1756/021 cables

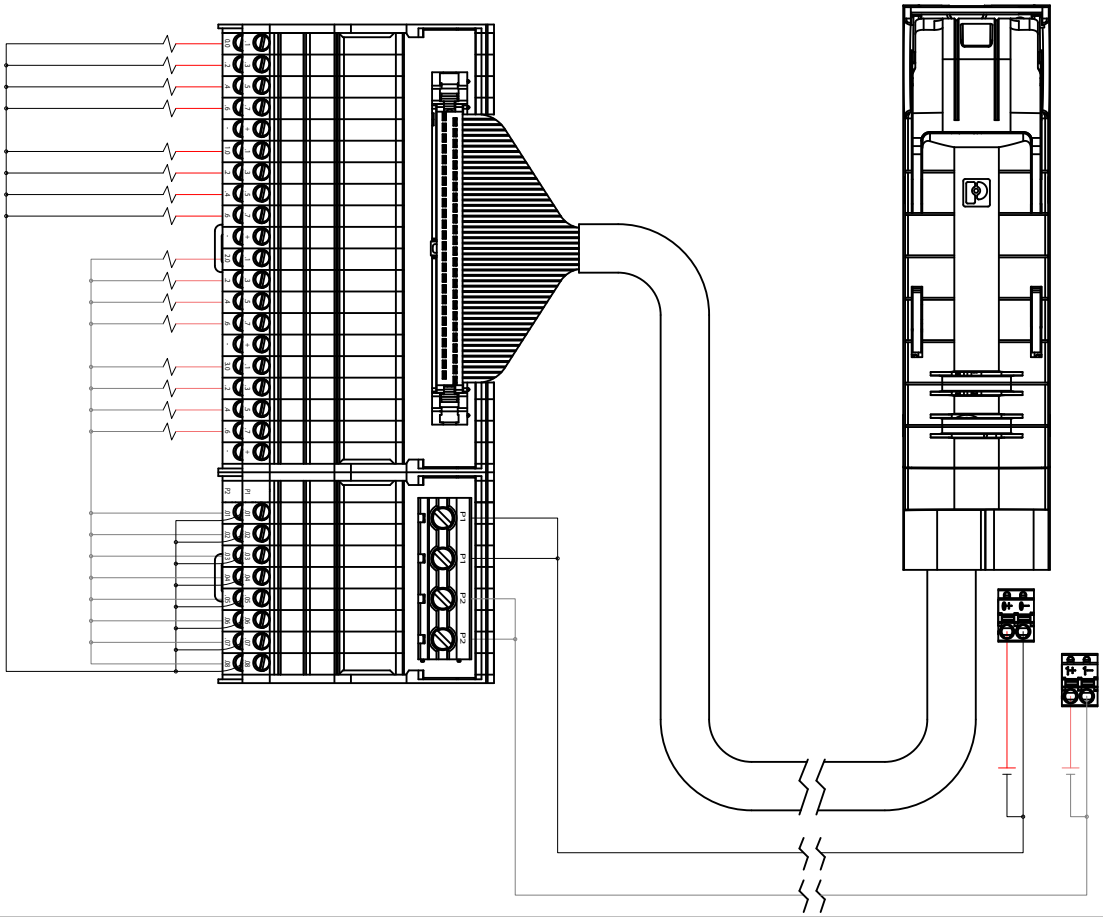
ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**OB16D**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 0	1	OUT-0	0.0	Byte 0
	2	+DC-0	0.1	
	16	GND-0	–	
I/O point 1	3	OUT-1	0.2	
	4	+DC-0	0.3	
	16	GND-0	–	
I/O point 2	5	OUT-2	0.4	
	6	+DC-0	0.5	
	16	GND-0	–	
I/O point 3	7	OUT-3	0.6	
	8	+DC-0	0.7	
	16	GND-0	–	
I/O point 4	9	OUT-4	1.0	Byte 1
	10	+DC-0	1.1	
	16	GND-0	–	
I/O point 5	11	OUT-5	1.2	
	12	+DC-0	1.3	
	16	GND-0	–	
I/O point 6	13	OUT-6	1.4	
	14	+DC-0	1.5	
	16	GND-0	–	
I/O point 7	15	OUT-7	1.6	
	16	+DC-0	1.7	
	16	GND-0	–	

Table 4-4 Field termination for VIP-PA-50/26/…/1756/021 cables [...]

ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**OB16D**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 8	17	OUT-8	2.0	Byte 2
	18	+DC-1	2.1	
	32	GND-1	–	
I/O point 9	19	OUT-9	2.2	
	20	+DC-1	2.3	
	32	GND-1	–	
I/O point 10	21	OUT-10	2.4	
	22	+DC-1	2.5	
	32	GND-1	–	
I/O point 11	23	OUT-11	2.6	
	24	+DC-1	2.7	
	32	GND-1	–	
I/O point 12	25	OUT-12	3.0	Byte 3
	26	+DC-1	3.1	
	32	GND-1	–	
I/O point 13	27	OUT-13	3.2	
	28	+DC-1	3.3	
	32	GND-1	–	
I/O point 14	29	OUT-14	3.4	
	30	+DC-1	3.5	
	32	GND-1	–	
I/O point 15	31	OUT-15	3.6	
	30	+DC-1	3.7	
	32	GND-1	–	

4.4.2 Wiring illustration

Figure 4-1 VIP-PA-50/26/.../1756/021 wiring illustration (021 adapter)



VIP-2/…/FLK50/PLC	
Max. permissible current (per branch)	1 A
VIP-…/PDM-2/16	
Max. permissible current (per branch)	15 A
Total current (per potential)	30 A
Application notes	
Max permissible current (per branch)	1 A
Max permissible current (per branch)	8 A

4.4.3 Technical data

Supply	
Maximum permissible operating voltage	30 V AC/DC
Max. permissible current,	
per path	1 A
per group	8 A
External cable diameter	10.3 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	1
Pitch	2.54 mm
Number of positions	50
Supply level	
Connection method	Push-in/plug
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm^2/0.14 … 1.5 mm^2/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.5 VIP-PA-50/26/…/1756/022

4.5.1 Description

VIP-PA-50/26/…/1756/022 adapter cables connect up to 16 channels of ControlLogix 1756 I/O whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 50-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can be connected to this cable adapter family, along with field termination options for connection to the field level.

Table 4-5, Table 4-6, Table 4-7, and Table 4-8 provides guidance on field termination wiring.

A shield drain wire with a ring lug is provided to connect the cable shield to a chassis ground.

Terminals are provided on the adapter for the Return (RTN) if not connected on the field termination board.

Table 4-5 Field termination for VIP-PA-50/26/…/1756/022 cables differential current/voltage

ControlLogix				Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-IF8**	**1756-IF16**	**VIP-2/…/FLK50/50/PLC VIP**		
		Terminal marking		**Differential current**	**Differential voltage**	**VIP Byte**
I/O point 0	2	IN-0	IN-0	0.1	0.1	Byte 0
	4	IN-1	IN-1	0.3	0.3	
	1	iRTN-0	iRTN-0	0.0	–	
I/O point 1	6	IN-2	IN-2	0.5	0.5	
	8	IN-3	IN-3	0.7	0.7	
	5	iRTN-2	iRTN-2	0.4	–	
I/O point 2	12	IN-4	IN-4	1.1	1.1	Byte 1
	14	IN-5	IN-5	1.3	1.3	
	11	iRTN-4	iRTN-4	1.0	–	
I/O point 3	16	IN-6	IN-6	1.5	1.5	
	18	IN-7	IN-7	1.7	1.7	
	15	iRTN-6	iRTN-6	1.4	–	
I/O point 4	20	–	IN-8	2.1	2.1	Byte 2
	22	–	IN-9	2.3	2.3	
	19	–	iRTN-8	2.0	–	
I/O point 5	24	–	IN-10	2.5	2.5	
	26	–	IN-11	2.7	2.7	
	23	–	iRTN-10	2.4	–	
I/O point 6	30	–	IN-12	3.1	3.1	Byte 3
	32	–	IN-13	3.3	3.3	
	29	–	iRTN-12	3.0	–	
I/O point 7	34	–	IN-14	3.5	3.5	
	36	–	IN-15	3.7	3.7	
	33	–	iRTN-14	3.4	–	

Table 4-6 Field termination for VIP-PA-50/26/…/1756/022 cables single-ended current

ControlLogix				Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF8**	**1756-IF16**	**VIP-2/…/FLK50/50/PLC VIP**	**VIP Byte**
		Terminal marking		**Terminal marking**	
I/O point 0	2	IN-0	IN-0	0.1	Byte 0
	1	iRTN-0	iRTN-0	0.0	
I/O point 1	4	IN-1	IN-1	0.3	
	3	iRTN-1	iRTN-1	0.2	
I/O point 2	6	IN-2	IN-2	0.5	
	5	iRTN-2	iRTN-2	0.4	
I/O point 3	8	IN-3	IN-3	0.7	
	7	iRTN-3	iRTN-3	0.6	
I/O point 4	12	IN-4	IN-4	1.1	Byte 1
	11	iRTN-4	iRTN-4	1.0	
I/O point 5	14	IN-5	IN-5	1.3	
	13	iRTN-5	iRTN-5	1.2	
I/O point 6	16	IN-6	IN-6	1.5	
	15	iRTN-6	iRTN-6	1.4	
I/O point 7	18	IN-7	IN-7	1.7	
	17	iRTN-7	iRTN-7	1.6	
I/O point 8	20	–	IN-8	2.1	Byte 2
	19	–	iRTN-8	2.0	
I/O point 9	22	–	IN-9	2.3	
	21	–	iRTN-9	2.2	
I/O point 10	24	–	IN-10	2.5	
	23	–	iRTN-10	2.4	
I/O point 11	26	–	IN-11	2.7	
	25	–	iRTN-11	2.6	
I/O point 12	30	–	IN-12	3.1	Byte 3
	29	–	iRTN-12	3.0	
I/O point 13	32	–	IN-13	3.3	
	31	–	iRTN-13	3.2	
I/O point 14	34	–	IN-14	3.5	
	33	–	iRTN-14	3.4	
I/O point 15	36	–	IN-15	3.7	
	35	–	iRTN-15	3.6	

Table 4-7 Field termination for VIP-PA-50/26/…/1756/022 cables for single-ended voltage

ControlLogix				Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF8**	**1756-IF16**	**VIP-2/…/FLK50/PLC VIP**	**VIP Byte**
		Terminal marking		**Terminal marking**	
I/O point 0	2	IN-0	IN-0	0.1	Byte 0
	9, 10, 27, 28	RTN	RTN	–	
I/O point 1	4	IN-1	IN-1	0.3	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 2	6	IN-2	IN-2	0.5	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 3	8	IN-3	IN-3	0.7	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 4	12	IN-4	IN-4	1.1	Byte 1
	9, 10, 27, 28	RTN	RTN	–	
I/O point 5	IN-5	14	14	1.3	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 6	16	IN-6	IN-6	1.5	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 7	18	IN-7	IN-7	1.7	
	9, 10, 27, 28	RTN	RTN	–	
I/O point 8	20	–	IN-8	2.1	Byte 2
	9, 10, 27, 28	–	RTN	–	
I/O point 9	22	–	IN-9	2.3	
	9, 10, 27, 28	–	RTN	–	
I/O point 10	24	–	IN-10	2.5	
	9, 10, 27, 28	–	RTN	–	
I/O point 11	26	–	IN-11	2.7	
	9, 10, 27, 28	–	RTN	–	
I/O point 12	30	–	IN-12	3.1	Byte 3
	9, 10, 27, 28	–	RTN	–	
I/O point 13	32	–	IN-13	3.3	
	9, 10, 27, 28	–	RTN	–	
I/O point 14	34	–	IN-14	3.5	
	9, 10, 27, 28	–	RTN	–	
I/O point 15	36	–	IN-15	3.7	
	9, 10, 27, 28	–	RTN	–	

Table 4-8 Field termination for VIP-PA-50/26/…/1756/022 cables for differential current

ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF16H**	**VIP-2/…/FLK50/PLC VIP**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 0	1	IN-0-	0.0	Byte 0
	2	IN-0+	0.1	
I/O point 1	3	IN-1-	0.2	
	4	IN-1+	0.3	
I/O point 2	5	IN-2-	0.4	
	6	IN-2+	0.5	
I/O point 3	7	IN-3-	0.6	
	8	IN-3+	0.7	
I/O point 4	11	IN-4-	1.0	Byte 1
	12	IN-4+	1.1	
I/O point 5	13	IN-5-	1.2	
	14	IN-5+	1.3	
I/O point 6	15	IN-6-	1.4	
	16	IN-6+	1.5	
I/O point 7	17	IN-7-	1.6	
	18	IN-7+	1.7	
I/O point 8	19	IN-8-	2.0	Byte 2
	20	IN-8+	2.1	
I/O point 9	21	IN-9-	2.2	
	22	IN-9+	2.3	
I/O point 10	23	IN-10-	2.4	
	24	IN-10+	2.5	
I/O point 11	25	IN-11-	2.6	
	26	IN-11+	2.7	
I/O point 12	29	IN-12-	3.0	Byte 3
	30	IN-12+	3.1	
I/O point 13	31	IN-13-	3.2	
	32	IN-13+	3.3	
I/O point 14	33	IN-14-	3.4	
	34	IN-14+	3.5	
I/O point 15	35	IN-15-	3.6	
	36	IN-15+	3.7	

Table 4-8 Field termination for VIP-PA-50/26/…/1756/022 cables for differential current [...]

ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF16H**	**VIP-2/…/FLK50/PLC VIP**	**VIP Byte**
		Terminal marking	**Terminal marking**	
	9	RTN	–	
	10	RTN	–	
	27	RTN	–	
	36	RTN	–	

4.5.2 Technical data

Supply	
Maximum permissible operating voltage	60 V DC
Max. permissible current, per path using common “RTN” terminals	 1 A 8 A
External cable diameter	11 mm ±0.3 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	1
Pitch	2.54 mm
Number of positions	50
Return level	
Connection method	Push-in/plug
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.6 VIP-PA-50/26/…/1756/023

4.6.1 Description

VIP-PA-50/26/…/1756/023 adapter cables connect up to eight channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 50-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-9 provides field termination details.

A shield drain wire with a ring lug is provided to connect the cable shield to a chassis ground.

Table 4-9 Field termination for VIP-PA-50/26/…/1756/023 cables

ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF8I**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 0	2	IN_0/V	0.1	Byte 0
	4	IN_0/I/SRC	0.3	
	6	RTN_0	0.5	
I/O point 1	1	IN_1/V	0.0	
	3	IN_1/I/SRC	0.2	
	5	RTN_1	0.4	
I/O point 2	10	IN_2/V	1.1	Byte 1
	12	IN_2/I/SRC	1.3	
	14	RTN_2	1.5	
I/O point 3	9	IN_3/V	1.0	
	11	IN_3/I/SRC	1.2	
	13	RTN_3	1.4	
I/O point 4	18	IN_4/V	2.1	Byte 2
	20	IN_4/I/SRC	2.3	
	22	RTN_4	2.5	
I/O point 5	17	IN_5/V	2.0	
	19	IN_5/I/SRC	2.2	
	21	RTN_5	2.4	
I/O point 6	26	IN_6/V	3.1	Byte 3
	28	IN_6/I/SRC	3.3	
	30	RTN_6	3.5	
I/O point 7	25	IN_7/V	3.0	
	27	IN_7/I/SRC	3.2	
	29	RTN_7	3.4	

4.6.2 Technical data

Supply	
Maximum permissible operating voltage	25 V AC 60 V DC
Max. permissible current, per path	1 A
External cable diameter	11 mm ±0.3 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	1
Pitch	2.54 mm
Number of positions	50

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.7 VIP-PA-50/26/…/1756/024

4.7.1 Description

VIP-PA-50/26/…/1756/024 adapter cables connect up to eight channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 30 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 50-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-10 and Figure 4-2 provide field termination details.

A shield drain wire with a ring lug is provided to connect the cable shield to a chassis ground.

Cold junction compensation (CJC) terminals are provided on the adapter (CJC-0 and CJC-1).

NOTE:
The CJC sensor must be in close proximity to where the thermocouple wiring is terminated on the VARIOFACE termination board. Please adhere to industry best practices regarding CJC placement.

Table 4-10 Field termination for VIP-PA-50/26/…/1756/024 cables

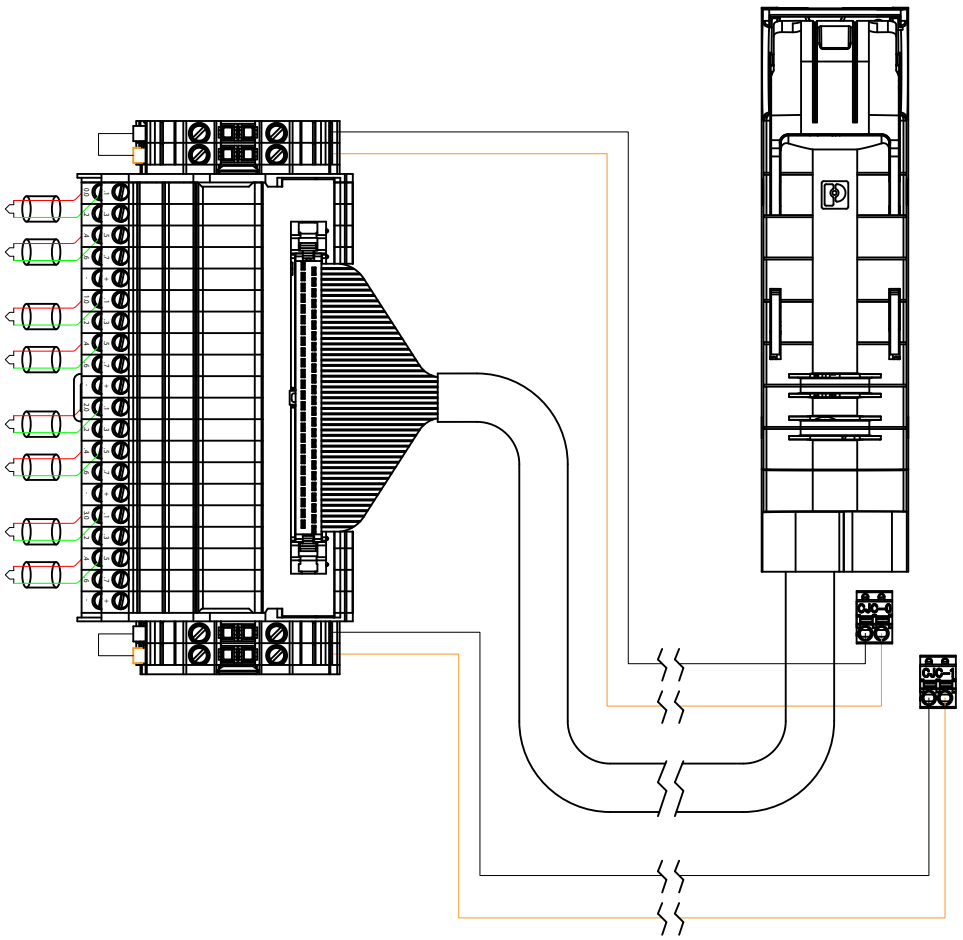
ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF8I**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 0	3	IN_0(+)/A	0.0	Byte 0
	4	IN_0(-)/B	0.1	
	5	IN_0/RTD D	0.2	
	6	IN_0/RTD C	0.3	
I/O point 1	7	IN_1(+)/A	0.4	
	8	IN_1(-)/B	0.5	
	9	IN_1/RTD D	0.6	
	10	IN_1/RTD C	0.7	
I/O point 2	11	IN_2(+)/A	1.0	Byte 1
	12	IN_2(-)/B	1.1	
	13	IN_2/RTD D	1.2	
	14	IN_2/RTD C	1.3	
I/O point 3	15	IN_3(+)/A	1.4	
	16	IN_3(-)/B	1.5	
	17	IN_3/RTD D	1.6	
	18	IN_3/RTD C	1.7	

Table 4-10 Field termination for VIP-PA-50/26/…/1756/024 cables [...]

ControlLogix			Phoenix Contact	
A-B I/O point reference	**A-B pin**	**1756-IF8I**	**VIP-2/…/ FLK50/PLC**	**VIP Byte**
		Terminal marking	**Terminal marking**	
I/O point 4	19	IN_4(+)/A	2.0	Byte 2
	20	IN_4(-)/B	2.1	
	21	IN_4/RTD D	2.2	
	22	IN_4/RTD C	2.3	
I/O point 5	23	IN_5(+)/A	2.4	
	24	IN_5(-)/B	2.5	
	25	IN_5/RTD D	2.6	
	26	IN_5/RTD C	2.7	
I/O point 6	27	IN_6(+)/A	3.0	Byte 3
	28	IN_6(-)/B	3.1	
	29	IN_6/RTD D	3.2	
	30	IN_6/RTD C	3.3	
I/O point 7	31	IN_7(+)/A	3.4	
	32	IN_7(-)/B	3.5	
	33	IN_7/RTD D	3.6	
	34	IN_7/RTD C	3.7	
Other points	1	CJC0	Power terminal	
	2	CJC0	Power terminal	
	35	CJC1	Power terminal	
	36	CJC1	Power terminal	

4.7.2 Wiring illustration

Figure 4-2 VIP-PA-50/26/…/1756/024 wiring illustration (024 adapter)



VIP-2/…/FLK50/PLC	
Max. permissible current (per branch)	1 A

Application notes:

Terminal block type is not critical for connecting 1756-CJC thermistor (UK 1,5 N shown).

4.7.3 Technical data

Supply	
Maximum permissible operating voltage	30 V DC
Max. permissible current	
per path	1 A
CJC	5 A
External cable diameter	11 mm ±0.3 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	1
Pitch	2.54 mm
Number of positions	50
CJC-0, CJC-1	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm^2/0.14 … 1.5 mm^2/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.8 VIP-PA-2X14/26/…/1756/060

4.8.1 Description

VIP-PA-50/26/…/1756/060 adapter cables connect up to eight channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 120 V AC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 2x14-position system cable.

Table 2-3 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-11 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 3), and 1+, 1- (I/O points 4 - 7), if not connected on the field termination board. A maximum current of 4 A per group (positive terminals) and 3 A per group (negative terminals) can be achieved, if wiring directly to the adapter.

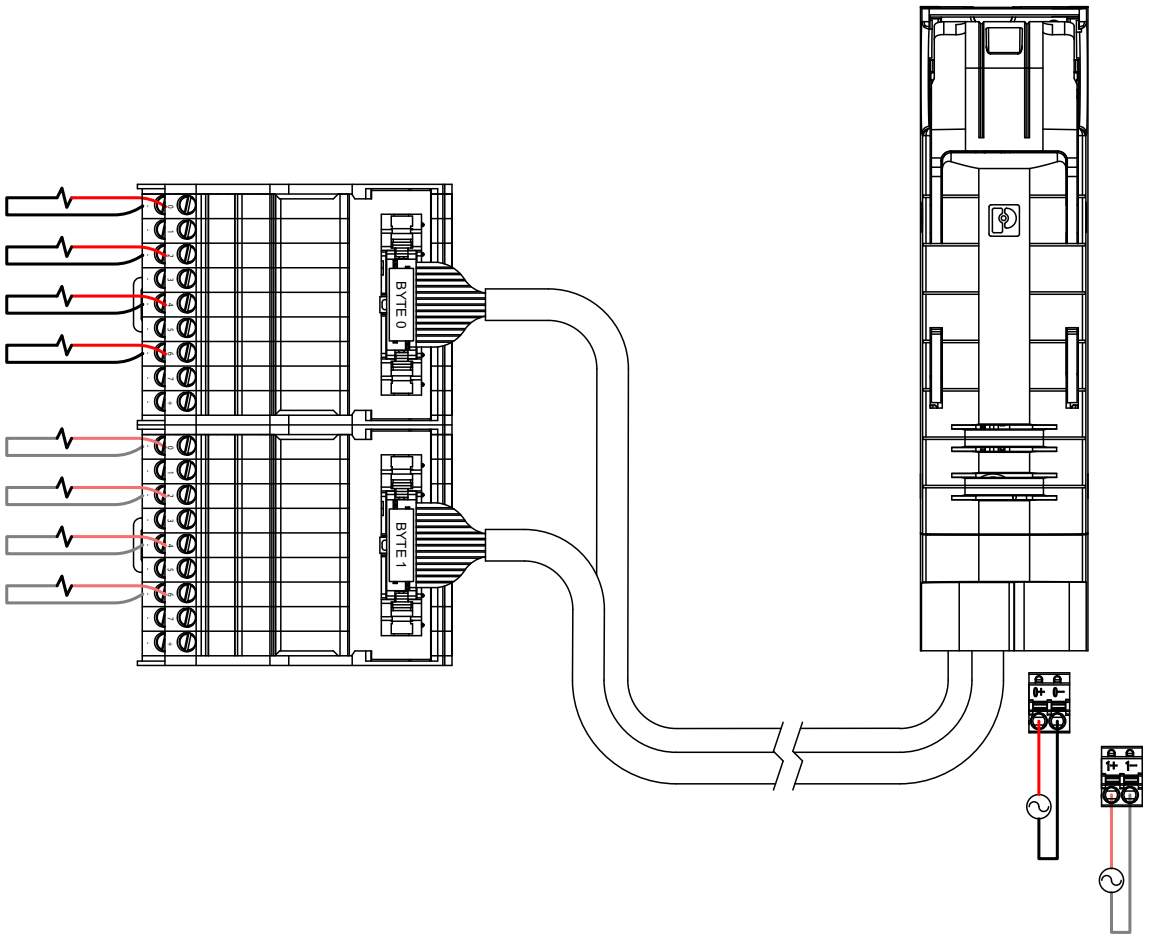
Figure 4-3, Figure 4-4, and Figure 4-5 detail specific wiring options based on desired power configuration.

4.8.2 Wiring chart

Table 4-11 Field termination for VIP-PA-2X14/26/…/1756/060 cables

ControlLogix				Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-OA8**	**VIP-2/… /FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/… /FLK14/8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**		
I/O point 0	1	OUT-0	0.0	See Figure 4-2	Termination board #1	Byte 0
	2	L1-0	0.1			
I/O point 1	3	OUT-1	0.2			
	4	L1-0	0.3			
I/O point 2	5	OUT-2	0.4			
	6	L1-0	0.5			
I/O point 3	7	OUT-3	0.6			
	8	L1-0	0.7			
I/O point 4	11	OUT-4	0.0	See Figure 4-2	Termination board #2	Byte 1
	12	L1-1	0.1			
I/O point 5	13	OUT-5	0.2			
	14	L1-1	0.3			
I/O point 6	15	OUT-6	0.4			
	16	L1-1	0.5			
I/O point 7	17	OUT-7	0.6			
	18	L1-1	0.7			
	10	L1-0	0.7			
	20	L1-1	0.7			

Figure 4-3 VIP-PA-2X14/26/…/1756/060 wiring illustration (060 adapter)



VIP-2/…/FLK14/8M/PLC

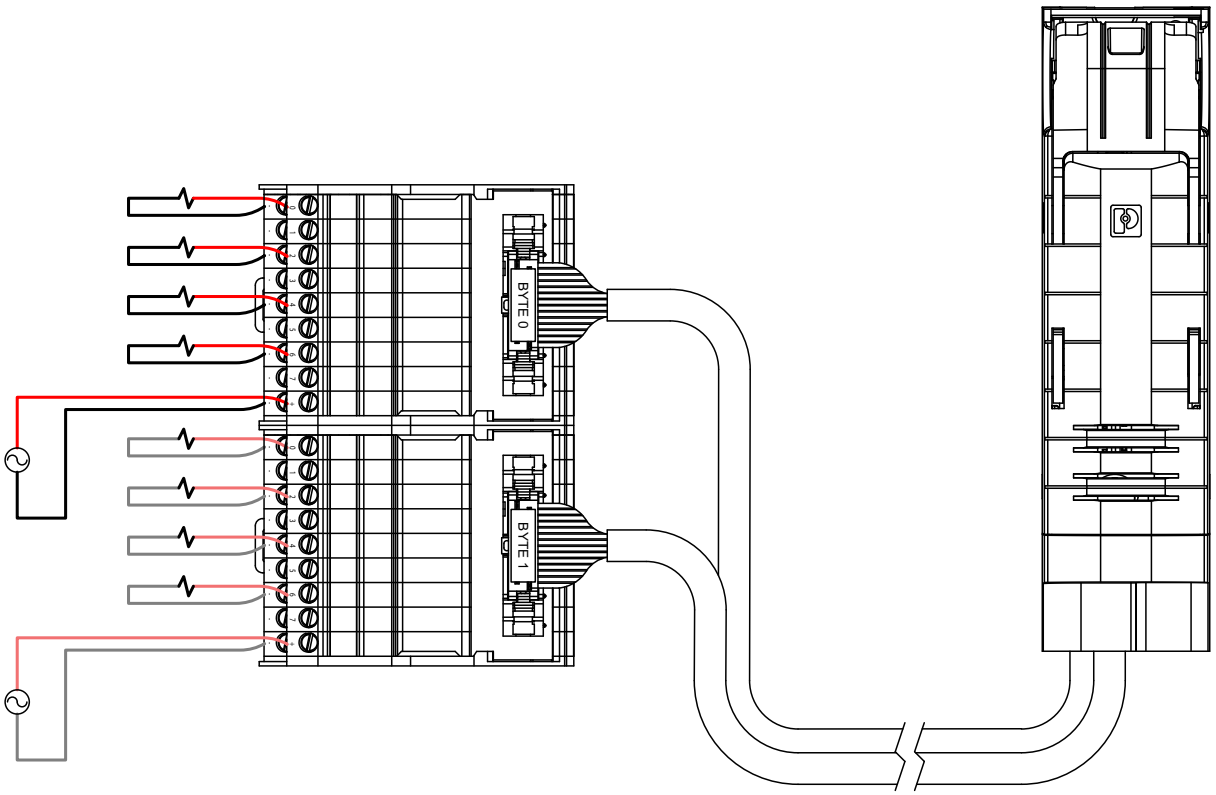
Max. permissible current	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A.

Maximum permissible current (per group) is 3 A per byte

Figure 4-4 VIP-PA-2X14/26/…/1756/060 wiring illustration (060 field)



VIP-2/…/FLK14/8M/PLC

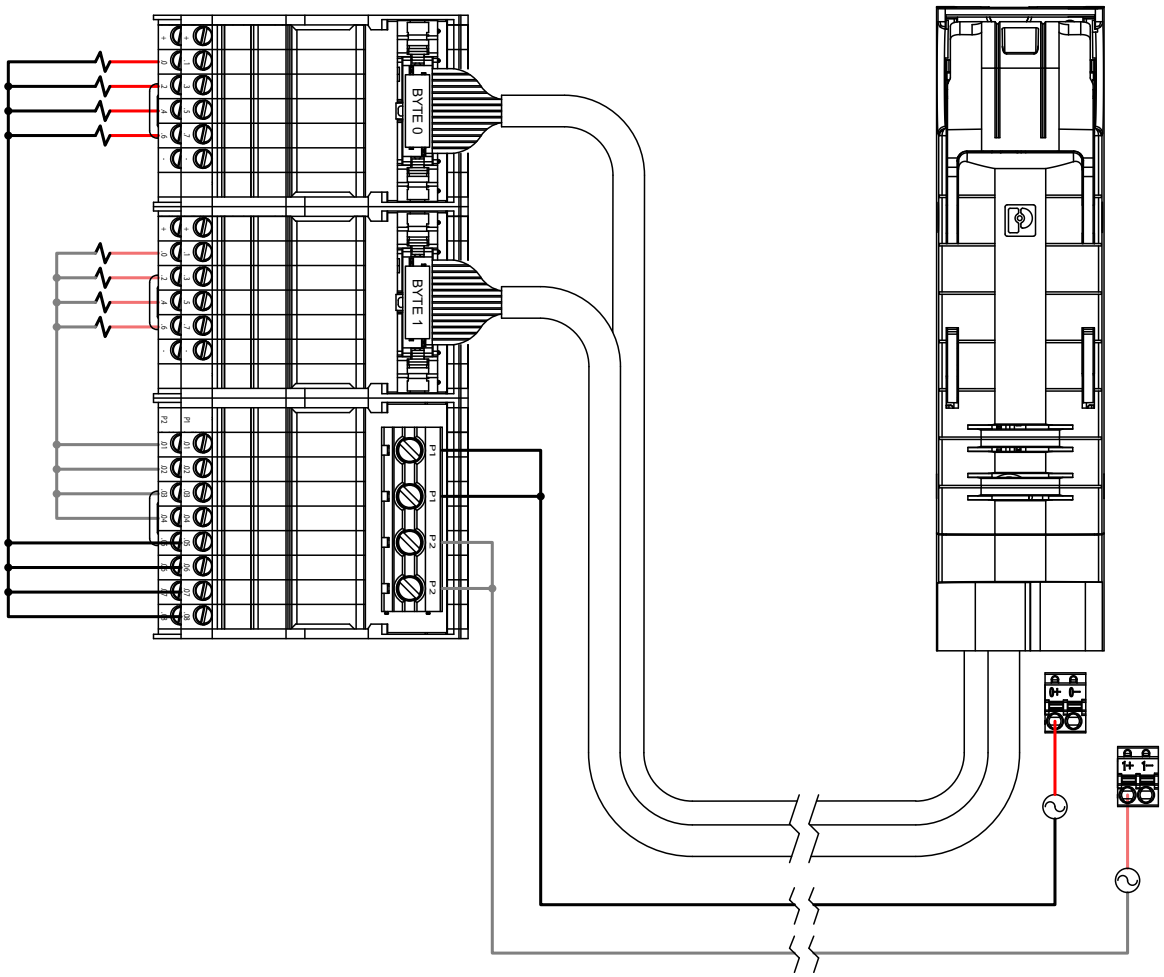
Max. permissible current	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A.

Maximum permissible current (per group) is 3 A per byte

Figure 4-5 VIP-PA-2X14/26/…/1756/060 wiring illustration (060 max)



VIP-2/…/FLK14/PLC	
Max. permissible current, per branch	1 A
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current, per potential	30 A

Application notes:

Maximum permissible current (per branch) is 1 A.

Maximum permissible current (per group) is 4 A per byte

4.8.3 Technical data

Supply	
Maximum permissible operating voltage	120 V DC
Max. permissible current	
per path	1 A
per group, positive terminals	4 A
per group, negative terminals	3 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 20-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	2
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.9 VIP-PA-2X14/26/…/1756/061

4.9.1 Description

VIP-PA-50/26/…/1756/061 adapter cables connect up to eight channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 2x14-position system cable.

Table 2-3 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-12 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 3), and 1+, 1- (I/O points 4 - 7), if not connected on the field termination board. A maximum current of 4 A per group can be achieved, if wiring directly to the adapter.

Figure 4-3, Figure 4-4, and Figure 4-5 detail specific wiring options based on desired power configuration.

4.9.2 Wiring chart

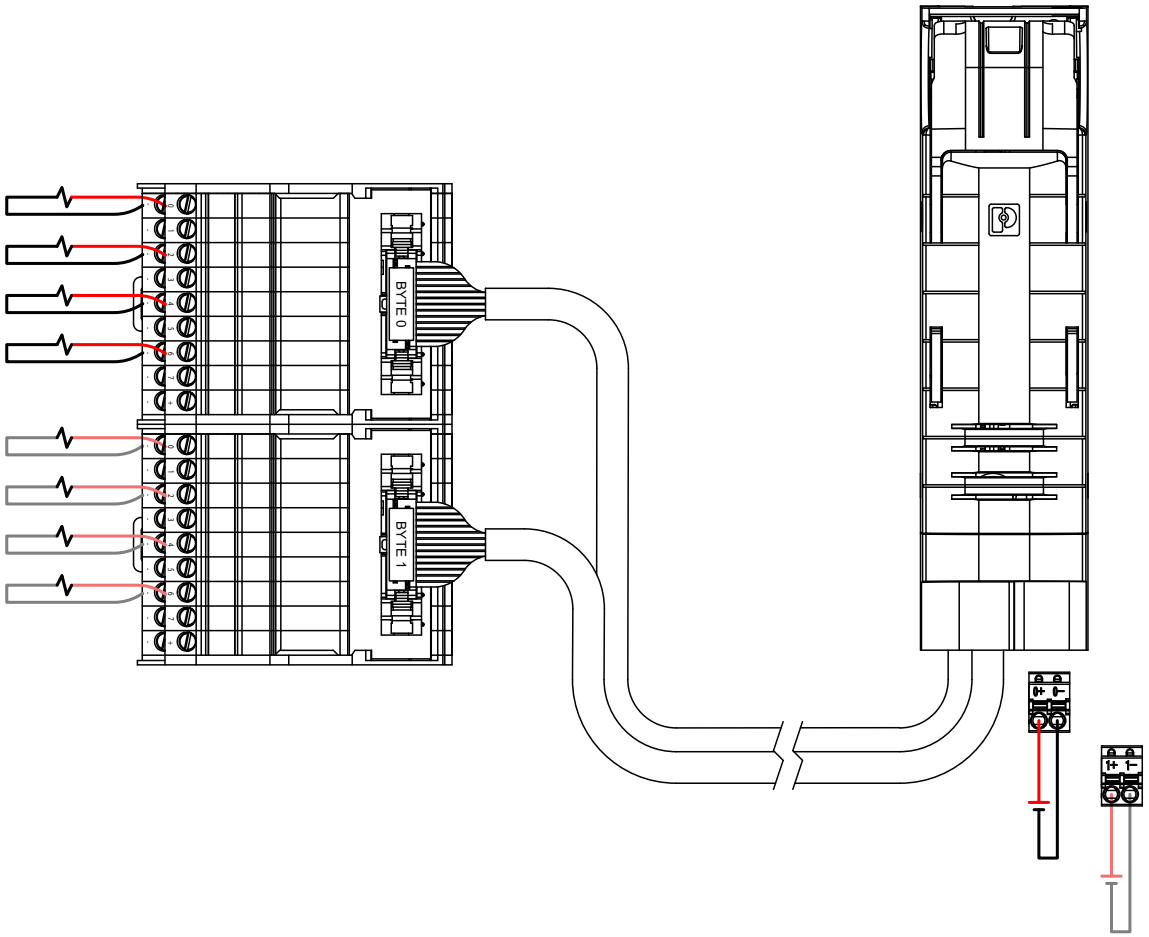
Table 4-12 Field termination for VIP-PA-2X14/26/…/1756/061 cables

ControlLogix			Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OB8**	**VIP-2/…/FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/ 8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**		
I/O point 0	1	OUT-0	0.0	See Figure 4-5	Termination board #1	Byte 0
	2	DC-0(+)[1]	0.1			
	9, 10	RTN OUT-0	–			
I/O point 1	3	OUT-1	0.2			
	2	DC-0(+)	0.3			
	9, 10	RTN OUT-0	–			
I/O point 2	5	OUT-2	0.4			
	2	DC-0(+)	0.5			
	9, 10	RTN OUT-0	–			
I/O point 3	7	OUT-3	0.6			
	2	DC-0(+)	0.7			
	9, 10	RTN OUT-0	–			
I/O point 4	11	OUT-4	0.0	See Figure 4-5	Termination board #2	Byte 1
	12	DC-1(+)	0.1			
	19, 20	RTN OUT-0	–			
I/O point 5	13	OUT-5	0.2			
	12	DC-1(+)	0.3			
	19, 20	RTN OUT-0	–			
I/O point 6	15	OUT-6	0.4			
	12	DC-1(+)	0.5			
	19, 20	RTN OUT-0	–			
I/O point 7	17	OUT-7	0.6			
	12	DC-1(+)	0.7			
	19, 20	RTN OUT-0	–			

[1] DC-0(+) and DC-1(+) are all common and tied to “+” VIP terminals and MC 1.5 for option of powering at I/O module.

4.9.3 Wiring illustrations

Figure 4-6 VIP-PA-2X14/26/…/1756/061 wiring illustration (061 adapter)



VIP-2/…/FLK14/8M/PLC

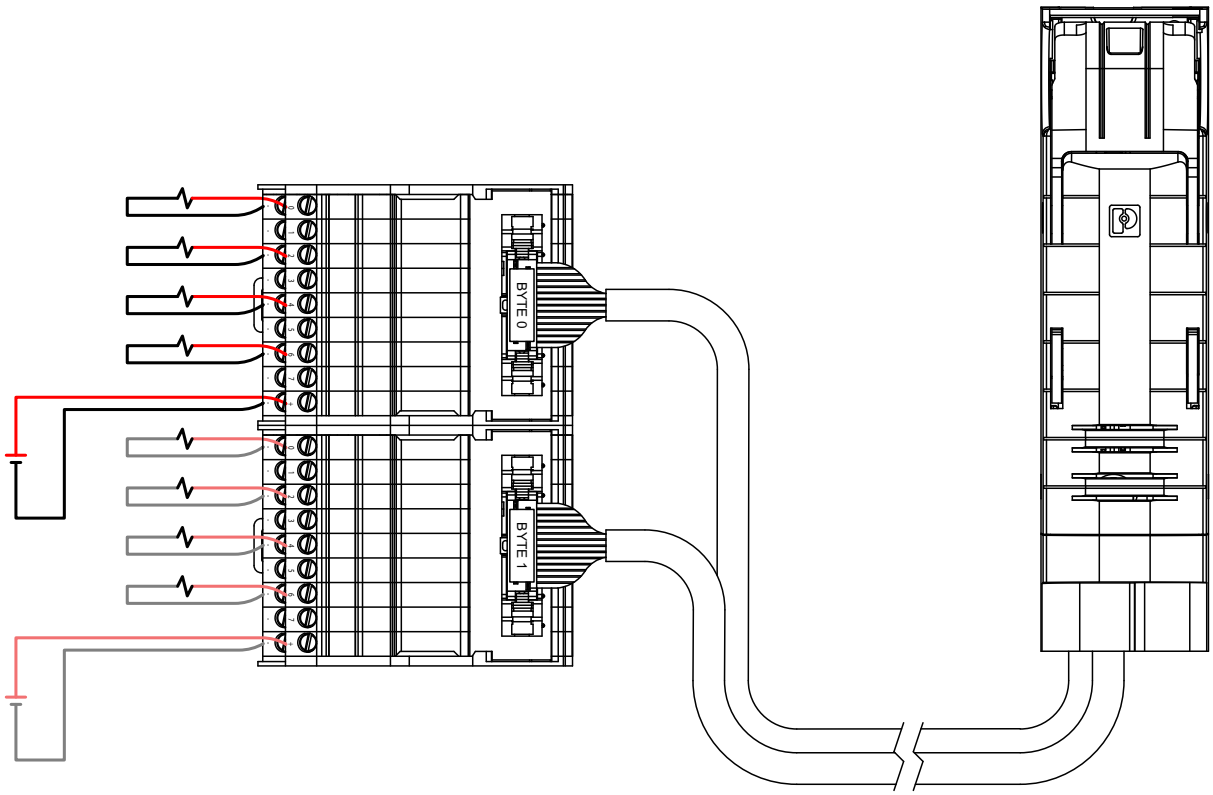
Max. permissible current	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A.

Maximum permissible current (per group) is 3 A per byte

Figure 4-7 VIP-PA-2X14/26/…/1756/061 wiring illustration (061 field)



VIP-2/…/FLK14/8M/PLC

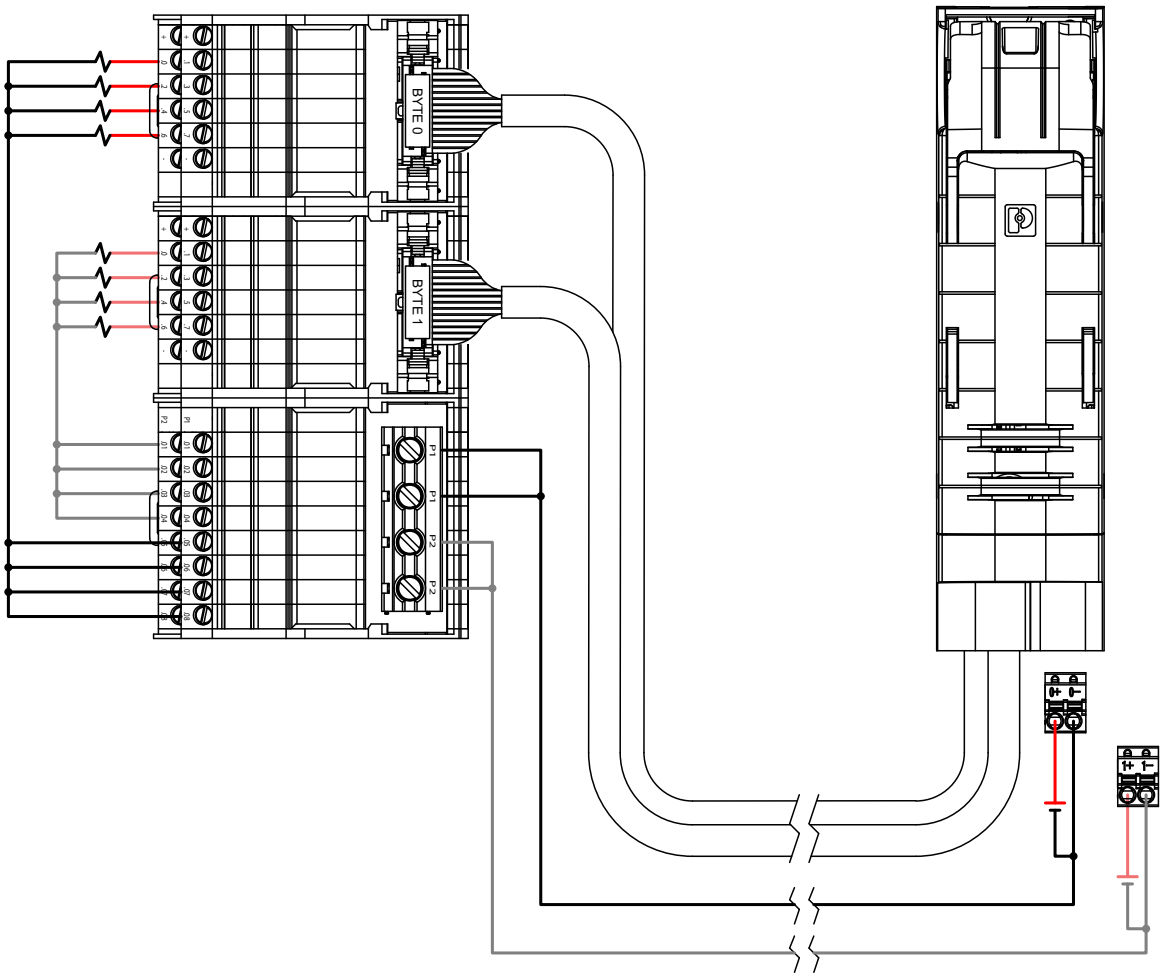
Max. permissible current	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 3 A per byte

Figure 4-8 VIP-PA-2X14/26/…/1756/061 wiring illustration (061 max)



VIP-2/…/FLK14/PLC	
Max. permissible current, per branch	1 A
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current, per potential	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 4 A

4.9.4 Technical data

Supply	
Maximum permissible operating voltage	60 V DC
Max. permissible current	
per path	1 A
per group, positive terminals	4 A
per group, negative terminals	4 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 20-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	2
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.10 VIP-PA-2X14/26/…/1756/062

4.10.1 Description

VIP-PA-50/26/…/1756/062 adapter cables connect up to 16 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 120 V AC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 2x14-position system cable.

Table 2-3 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-13 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 7), and 1+, 1- (I/O points 8 - 15), if not connected on the field termination board. A maximum current of 8 A per group (negative terminals) and (3 A positive terminals) can be achieved, if wiring directly to the adapter.

Figure 4-9, Figure 4-10, and Figure 4-11 detail specific wiring options based on desired power configuration.

4.10.2 Wiring chart

Table 4-13 Field termination for VIP-PA-2X14/26/…/1756/062 cables

ControlLogix							
A-B I/O point reference	**A-B pin**	**1756-IA16, 1756-IN16**	**1756-IB16, 1756-IC16**	**VIP-2/…/FLK14/PLC VIP-2/…/FLK14/LED/PLC (IB16 only) FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**			
I/O point 0	1	IN-0	IN-0	0.0	See Figure 4-8	Termination board #1 or V8#1 (IB16 only)	Byte 0
	9, 10	L2-0	GND-0	–			
I/O point 1	2	IN-1	IN-1	0.1			
	9, 10	L2-0	GND-0	–			
I/O point 2	3	IN-2	IN-2	0.2			
	9, 10	L2-0	GND-0	–			
I/O point 3	4	IN-3	IN-3	0.3			
	9, 10	L2-0	GND-0	–			
I/O point 4	5	IN-4	IN-4	0.4			
	9, 10	L2-0	GND-0	–			
I/O point 5	6	IN-5	IN-5	0.5			
	9, 10	L2-0	GND-0	–			
I/O point 6	7	IN-6	IN-6	0.6			
	9, 10	L2-0	GND-0	–			
I/O point 7	8	IN-7	IN-7	0.7			
	9	L2-0	GND-0	–			

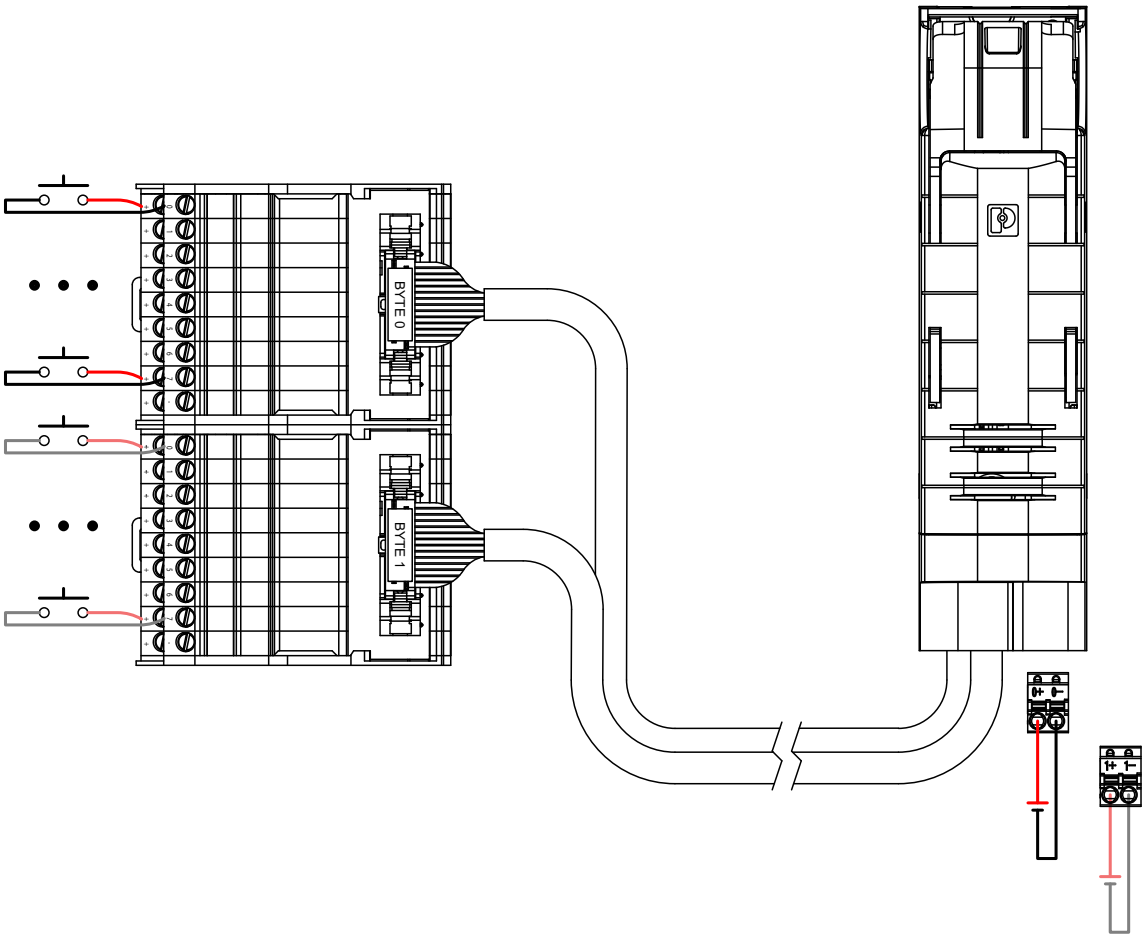
Table 4-13 Field termination for VIP-PA-2X14/26/…/1756/062 cables [...]

ControlLogix							
A-B I/O point reference	**A-B pin**	**1756-IA16, 1756-IN16**	**1756-IB16, 1756-IC16**	**VIP-2/…/FLK14/PLC VIP-2/…/FLK14/LED/PLC (IB16 only) FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**			
I/O point 8	11	IN-8	IN-8	0.0	See Figure 4-8	Termination board #1 or V8#1 (IB16 only)	Byte 0
	19, 20	L2-1	GND-1	–			
I/O point 9	12	IN-9	IN-9	0.1			
	19, 20	L2-1	GND-1	–			
I/O point 10	13	IN-10	IN-10	0.2			
	19, 20	L2-1	GND-1	–			
I/O point 11	14	IN-11	IN-11	0.3			
	19, 20	L2-1	GND-1	–			
I/O point 12	15	IN-12	IN-12	0.4			
	19, 20	L2-1	GND-1	–			
I/O point 13	16	IN-13	IN-13	0.5			
	19, 20	L2-1	GND-1	–			
I/O point 14	17	IN-14	IN-14	0.6			
	19, 20	L2-1	GND-1	–			
I/O point 15	18	IN-15	IN-15	0.7			
	19, 20	L2-1	GND-1	–			

For connection options to PLC V8… adapters and relay devices, refer to the current interface technology and switching devices catalog or the online configurator at phoenixcontact.com

4.10.3 Wiring illustrations

Figure 4-9 VIP-PA-2X14/26/…/1756/062 wiring illustration (062 adapter)



VIP-2/…/FLK14/8P/PLC

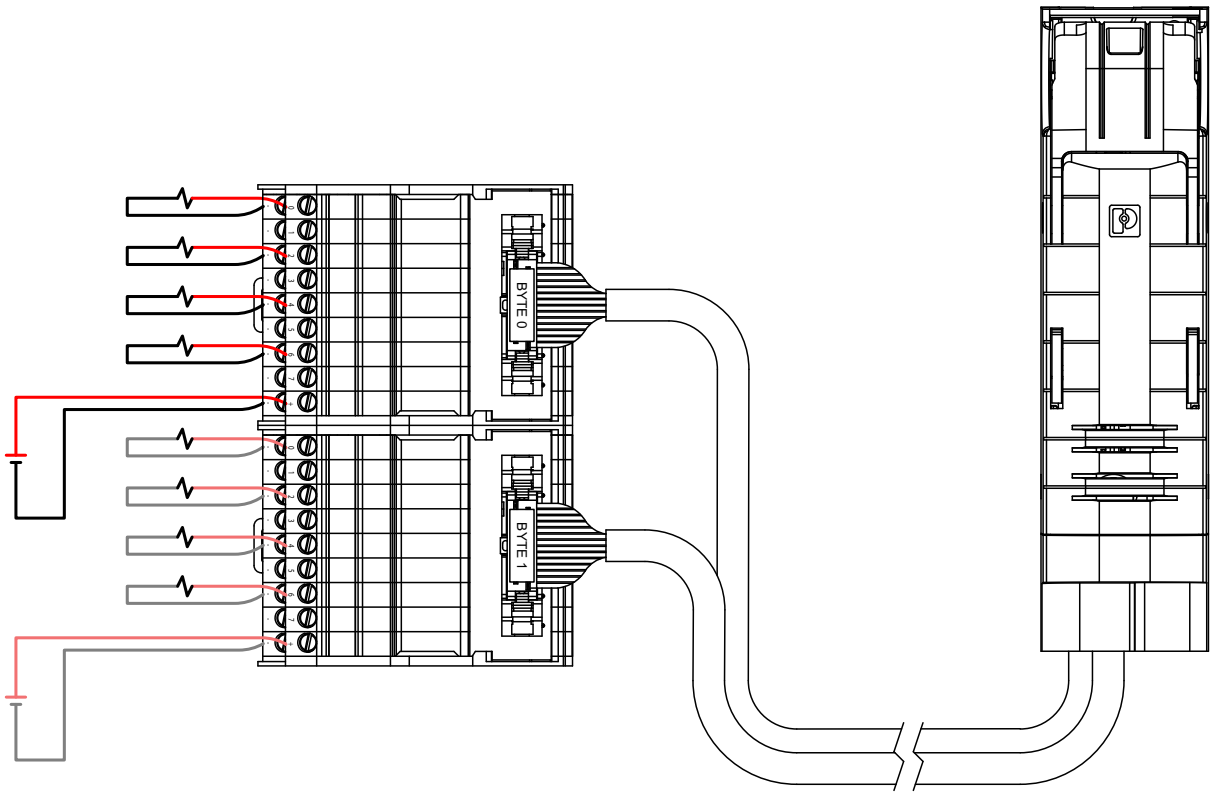
Max. permissible current,	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 3 A per byte

Figure 4-10 VIP-PA-2X14/26/…/1756/062 wiring illustration (062 field)



VIP-2/…/FLK14/8PPLC

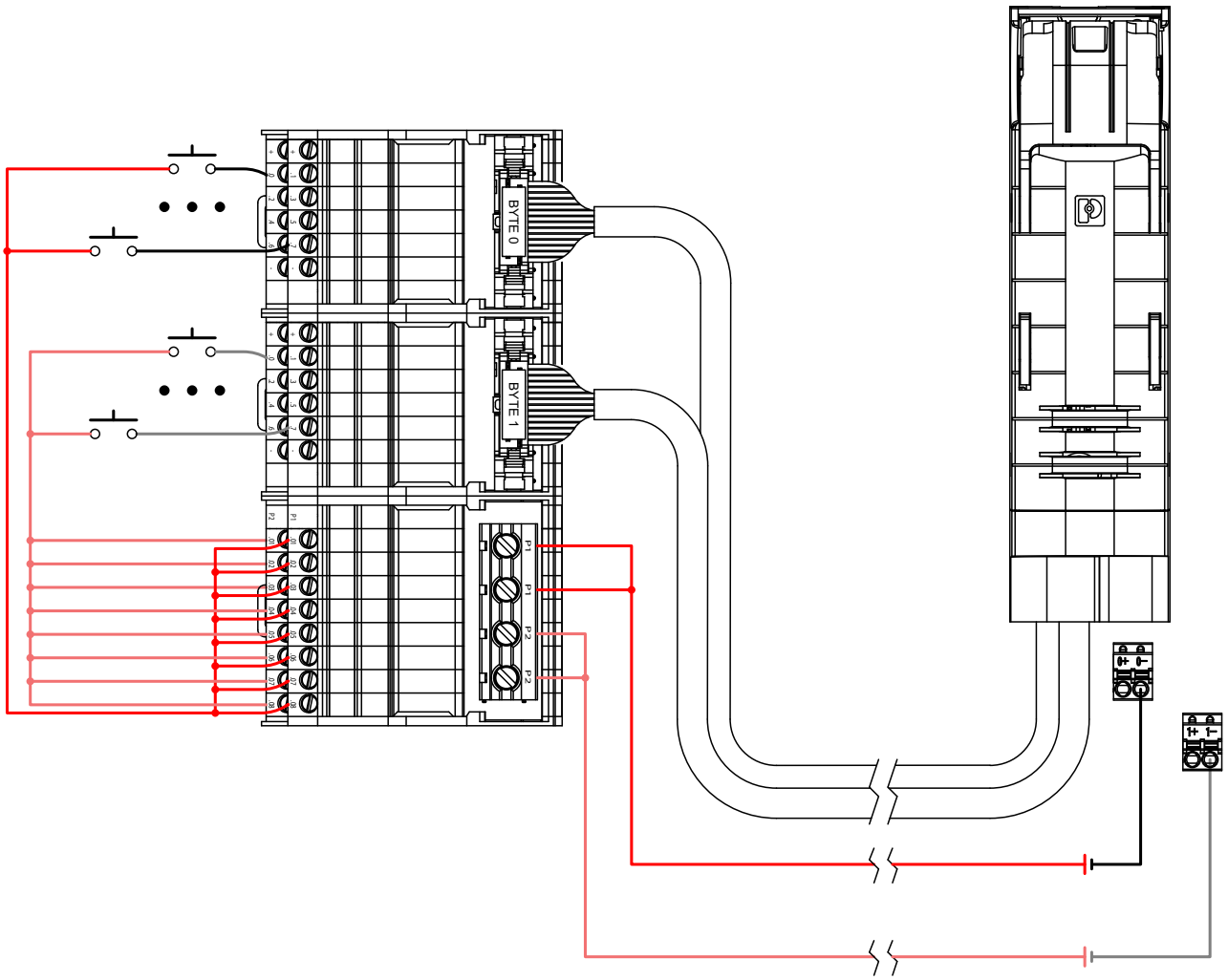
Max. permissible current,	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 3 A per byte

Figure 4-11 VIP-PA-2X14/26/…/1756/062 wiring illustration (062 max)



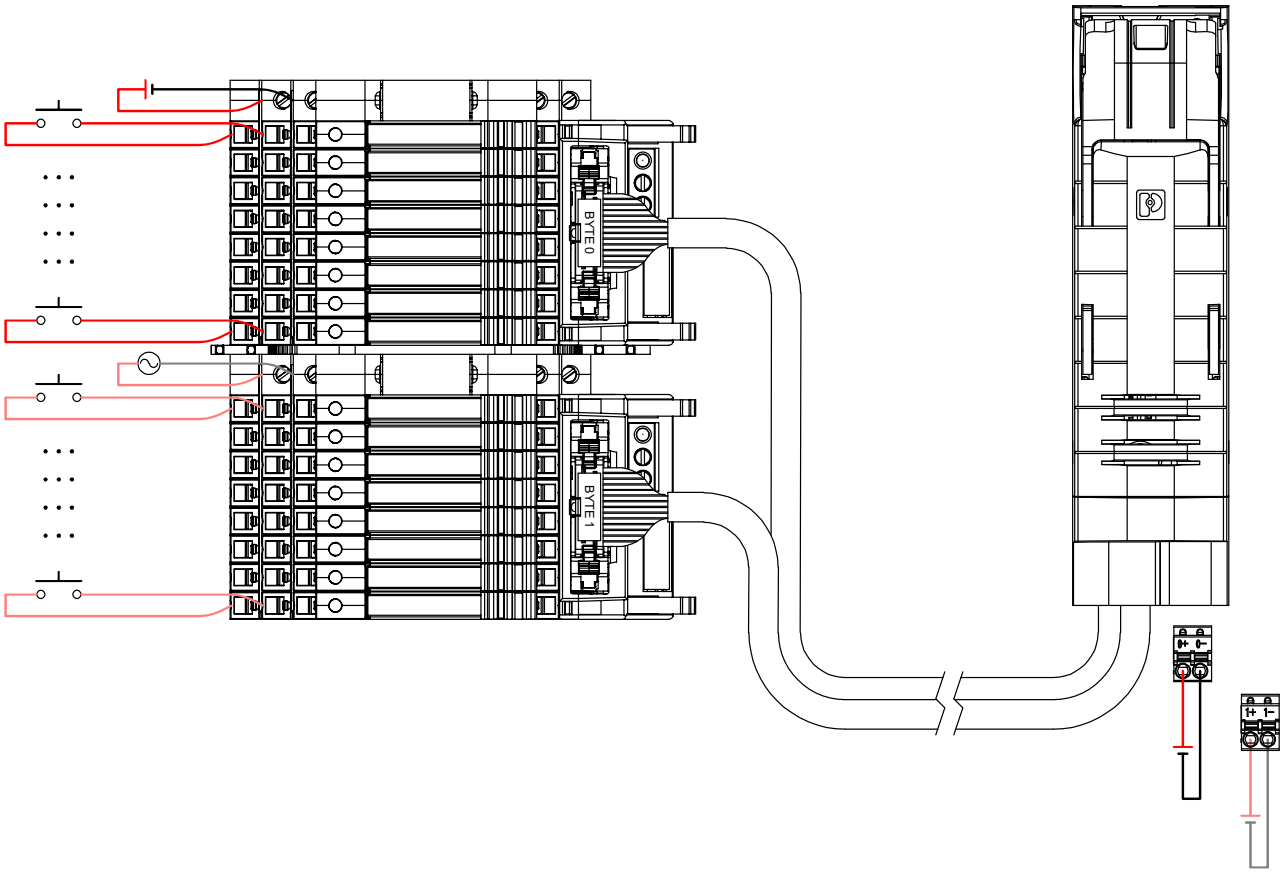
VIP-2/…/FLK14/PLC	
Max. permissible current, per branch	1 A
VIP-2/…/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current, per potential	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 8 A per byte

Figure 4-12 VIP-PA-2X14/26/…/1756/062 wiring illustration (062 V8 adapter)

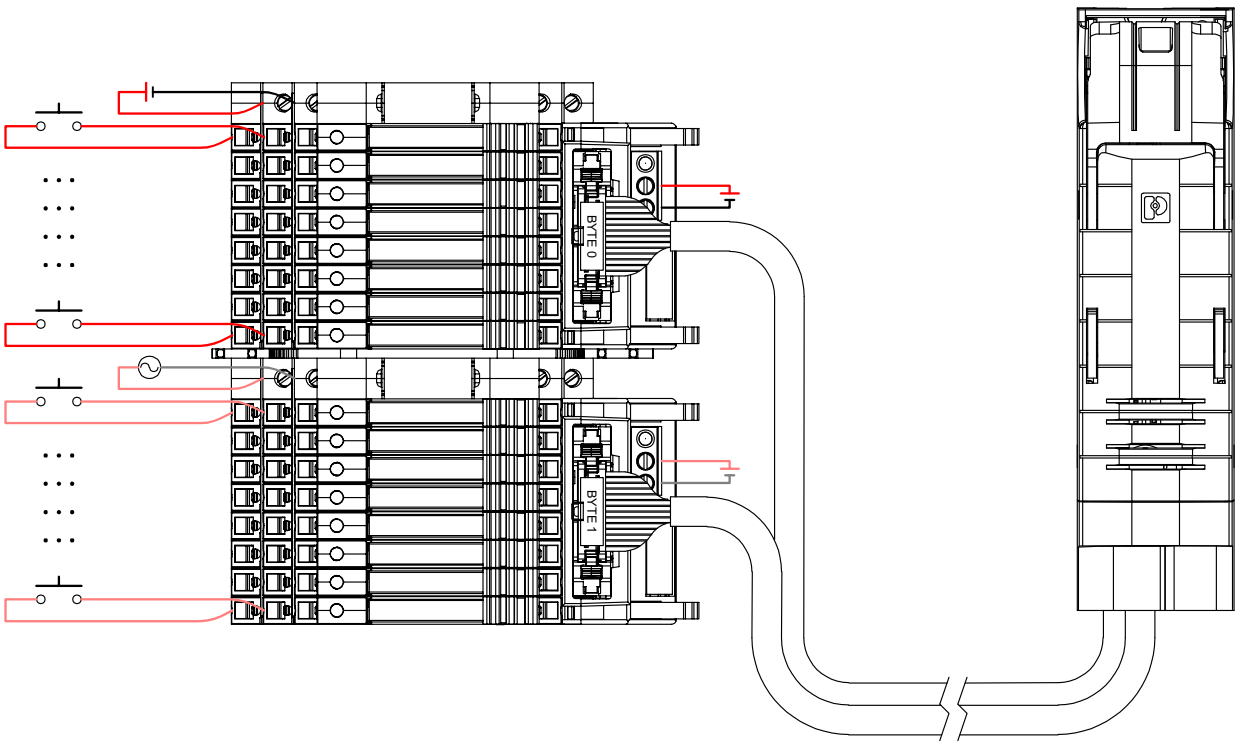


PLC-RPT-24DC/ 1AU/SEN (Item No. 2900313)	Option: 24 V DC signal inputs
Nominal input current at U_N	24 V DC
Typical input current at U_N	9 mA
PLC-RPT-120UC/ 1AU/SEN (Item No. 2900314)	Option: 120 V AC signal inputs
Nominal input current at U_N	120 V AC 110 V DC
Typical input current at U_N	3.5 mA
PLC-V8/FLK/IN (Item No. 2296553)	
Max. permissible current, per branch	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-13 VIP-PA-2X14/26/…/1756/062 wiring illustration (062 V8 field)



PLC-RPT-24DC/ 1AU/SEN (Item No. 2900313)	Option: 24 V DC signal inputs
Nominal input current at U_N	24 V DC
Typical input current at U_N	9 mA
PLC-RPT-120UC/ 1AU/SEN (Item No. 2900314)	Option: 120 V AC signal inputs
Nominal input current at U_N	120 V AC 110 V DC
Typical input current at U_N	3.5 mA
PLC-V8/FLK/IN (Item No. 2296553)	
Max. permissible current, per branch	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

4.10.4 Technical data

Supply	
Maximum permissible operating voltage	120 V AC
Max. permissible current	
per path	1 A
per group, positive terminals	3 A
per group, negative terminals	8 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 20-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	2
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.11 VIP-PA-2X14/26/…/1756/063

4.11.1 Description

VIP-PA-50/26/…/1756/063 adapter cables connect up to 16 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 120 V AC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 2x14-position system cable.

Table 2-3 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-14 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 7), and 1+, 1- (I/O points 8 - 15), if not connected on the field termination board. A maximum current of 8 A per group can be achieved, if wiring directly to the adapter.

Figure 4-13, Figure 4-14, and Figure 4-15 detail specific wiring options based on desired power configuration.

4.11.2 Wiring chart

Table 4-14 Field termination for VIP-PA-2X14/26/…/1756/063 cables

ControlLogix				Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OA16**	**1756-OB16E**	**VIP-2/…/FLK14/PLC VIP-2/…/FLK14/LED/PLC (OB16 only) FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**			
I/O point 0	1	OUT-0	OUT-0	0.0	See Figure 4-13	Termination board #1 or V8#1 (IB16 only)	Byte 0
	9	L2-0	RTN OUT-0	–			
I/O point 1	2	OUT-1	OUT-1	0.1			
	9	L2-0	RTN OUT-0	–			
I/O point 2	3	OUT-2	OUT-2	0.2			
	9	L2-0	RTN OUT-0	–			
I/O point 3	4	OUT-3	OUT-3	0.3			
	9	L2-0	RTN OUT-0	–			
I/O point 4	5	OUT-4	OUT-4	0.4			
	9	L2-0	RTN OUT-0	–			
I/O point 5	6	OUT-5	OUT-5	0.5			
	9	L2-0	RTN OUT-0	–			
I/O point 6	7	OUT-6	OUT-6	0.6			
	9	L2-0	RTN OUT-0	–			
I/O point 7	8	OUT-7	OUT-7	0.7			
	9	L2-0	RTN OUT-0	–			

Table 4-14 Field termination for VIP-PA-2X14/26/…/1756/063 cables [...]

ControlLogix				Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OA16**	**1756-OB16E**	**VIP-2/…/FLK14/PLC VIP-2/…/FLK14/LED/PLC (OB16 only) FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8M/PLC**	**Reference**	**Cable branch**
		Terminal marking		**Terminal marking**			
I/O point 8	11	OUT-8	OUT-8	0.0	See Figure 4-13	Termination board #2 or V8#2 (IB16 only)	Byte 1
	19	L2-1	RTN OUT-1	–			
I/O point 9	12	OUT-9	OUT-9	0.1			
	19	L2-1	RTN OUT-1	–			
I/O point 10	13	OUT-10	OUT-10	0.2			
	19	L2-1	RTN OUT-1	–			
I/O point 11	14	OUT-11	OUT-11	0.3			
	19	L2-1	RTN OUT-1	–			
I/O point 12	15	OUT-12	OUT-12	0.4			
	19	L2-1	RTN OUT-1	–			
I/O point 13	16	OUT-13	OUT-13	0.5			
	19	L2-1	RTN OUT-1	–			
I/O point 14	17	OUT-14	OUT-14	0.6			
	19	L2-1	RTN OUT-1	–			
I/O point 15	18	OUT-15	OUT-15	0.7			
	19	L2-1	RTN OUT-1	–			
	10	L1-0	DC-0+	+			
	20	L1-1	DC-1+	+			

For connection options to PLC V8… adapters and relay devices, refer to the current interface technology and switching devices catalog or the online configurator at phoenixcontact.com

4.11.3 Wiring illustrations

Figure 4-14 VIP-PA-2X14/26/…/1756/063 wiring illustration (063 adapter)

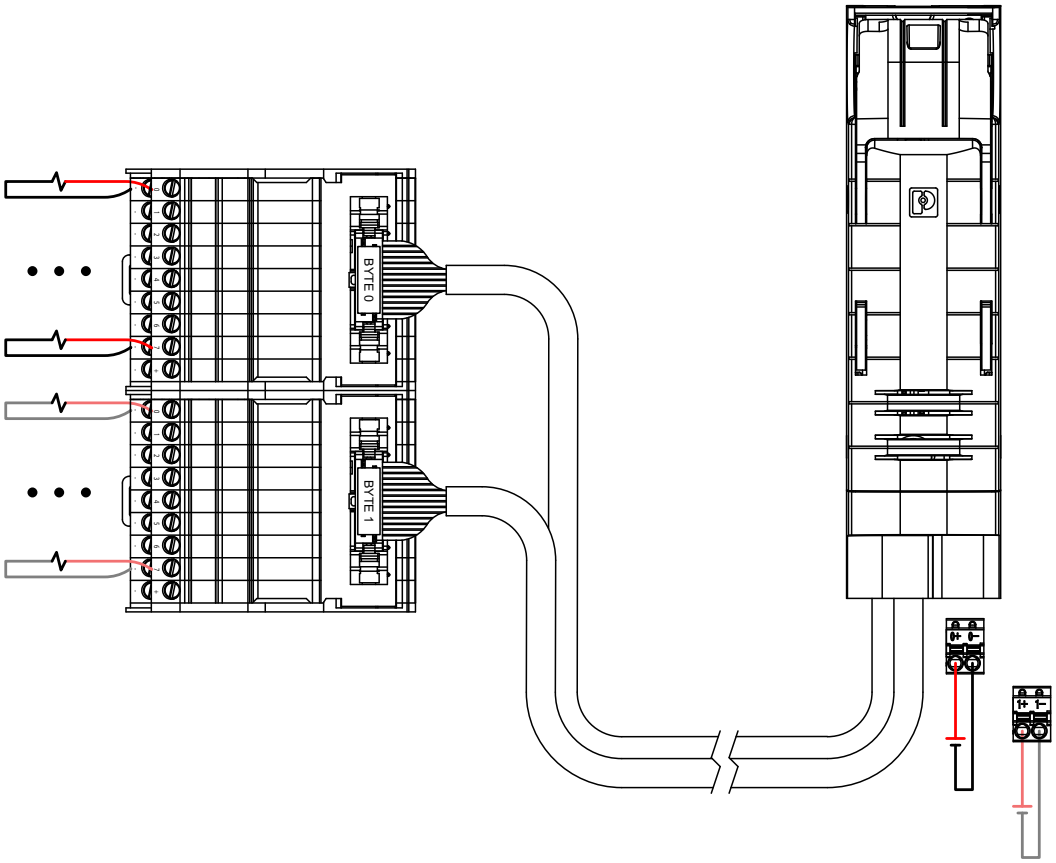
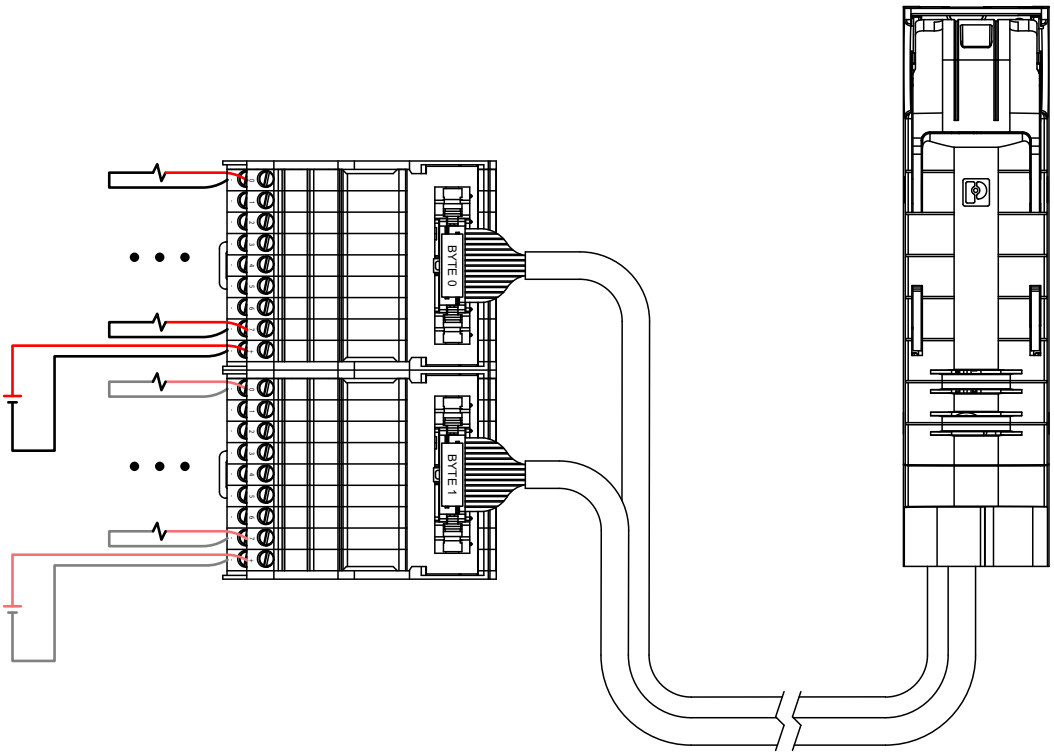


Figure 4-15 VIP-PA-2X14/26/…/1756/063 wiring illustration (063 field)



VIP-2/…/FLK14/8M/PLC

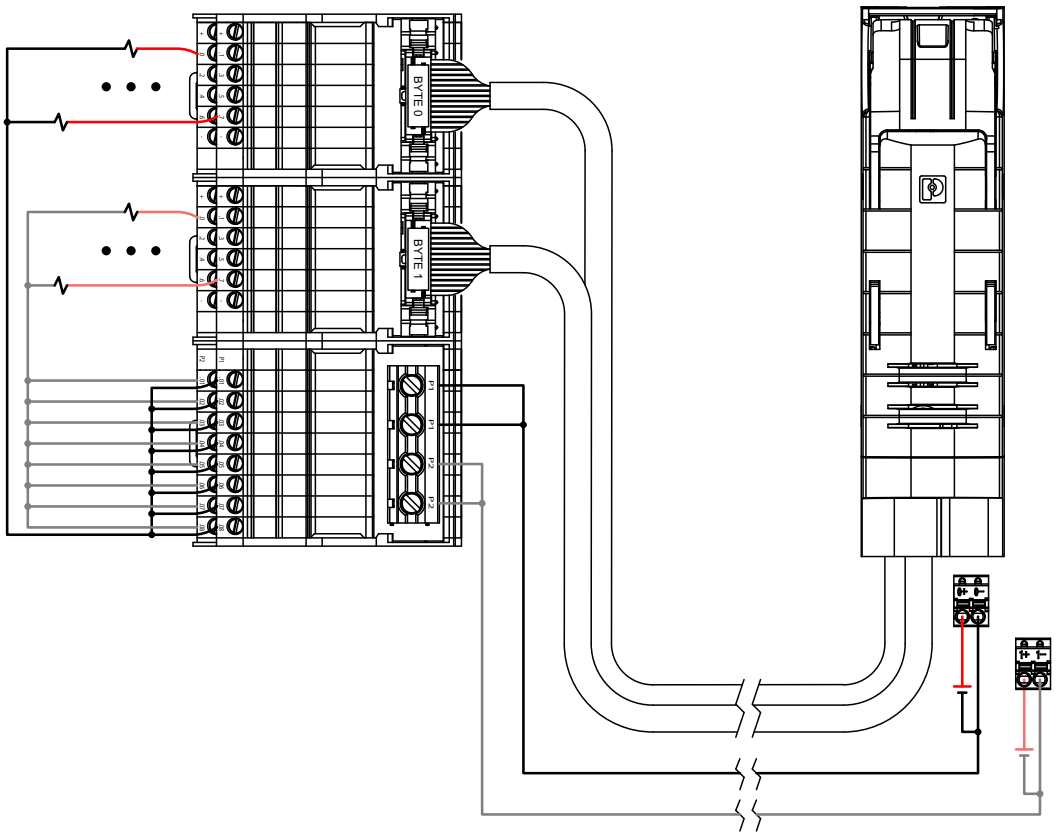
Max. permissible current	
Per branch	1 A
Separate power supply, per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 3 A (3 A per byte)

Figure 4-16 VIP-PA-2X14/26/…/1756/063 wiring illustration (063 max)



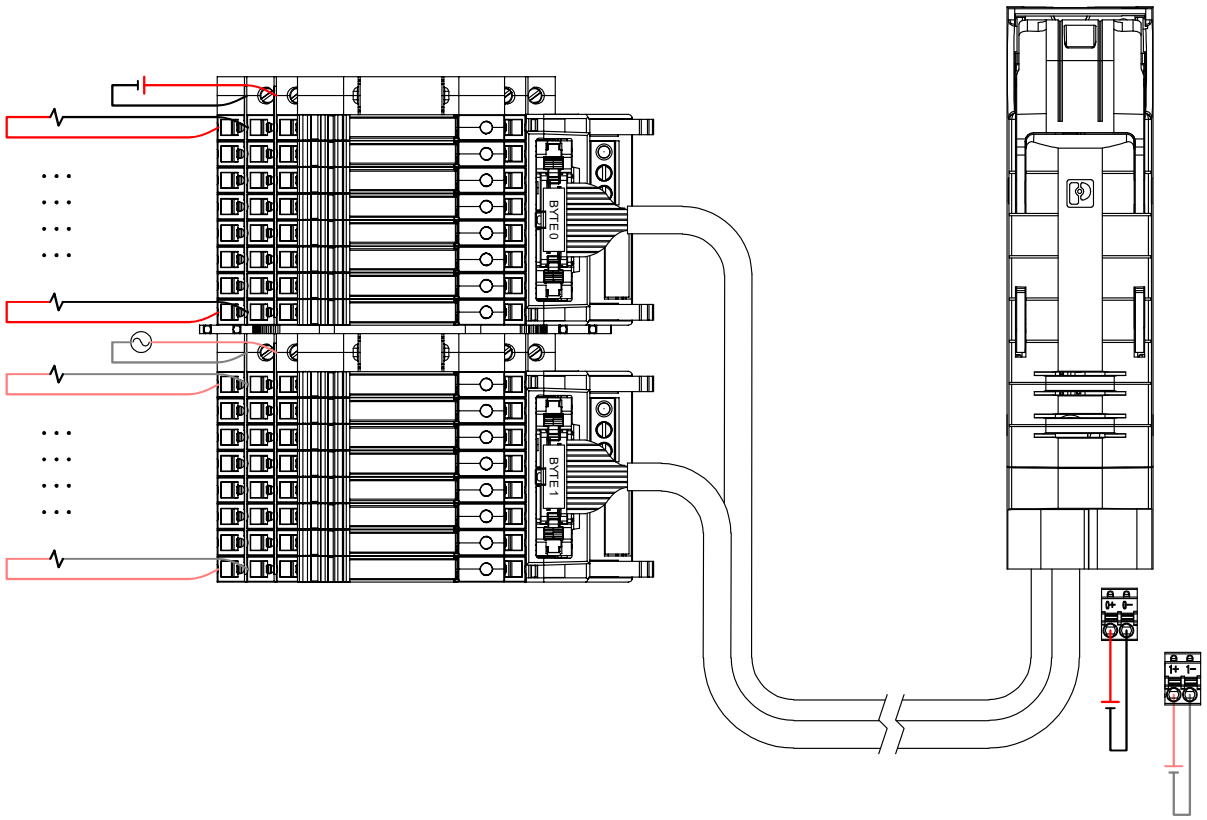
VIP-2/…/FLK14/PLC	
Max. permissible current, per branch	1 A
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current, per potential	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 8 A

Figure 4-17 VIP-PA-2X14/26/…/1756/063 wiring illustration (063 V8 ACT adapter)

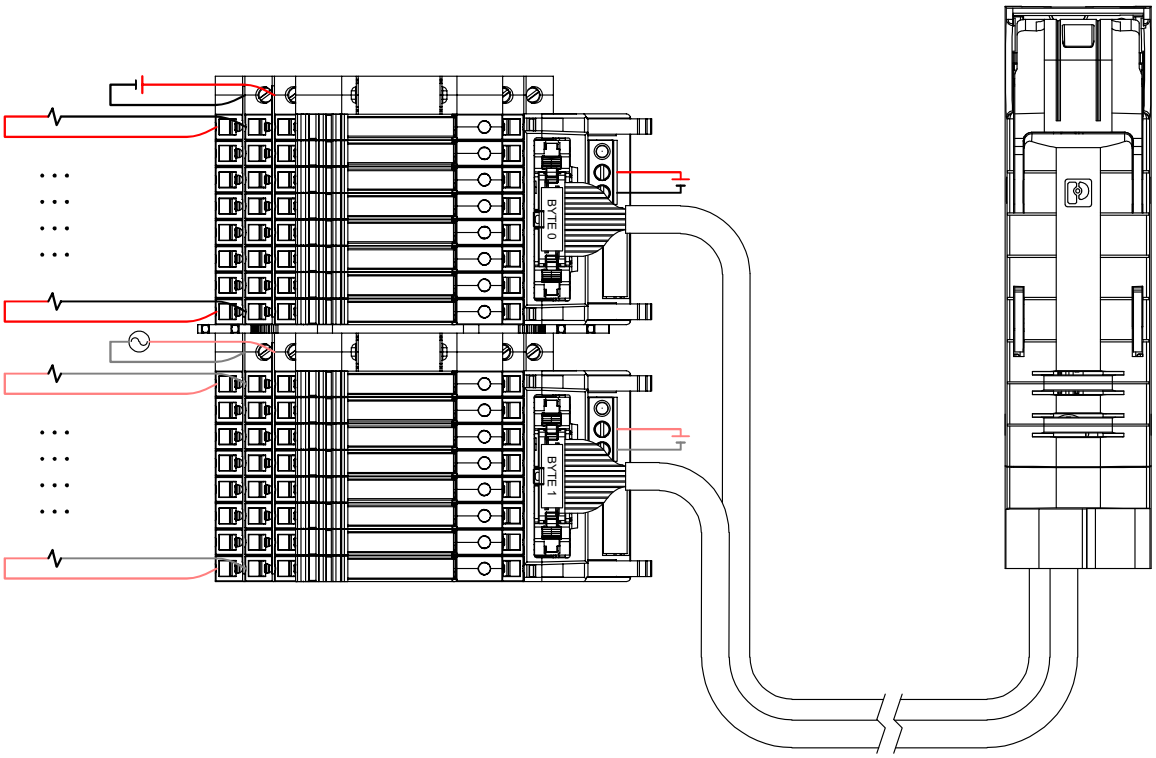


PLC-RPT-24DC/1/ACT (Item No. 2900312)	
Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT (Item No. 2295554)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-18 VIP-PA-2X14/26/…/1756/063 wiring illustration (063 V8 ACT field)



PLC-RPT-24DC/1/ACT (Item No. 2900312)	
Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT (Item No. 2295554)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

4.11.4 Technical data

Supply	
Maximum permissible operating voltage	120 V AC
Max. permissible current	
per path	1 A
per group, positive terminals	8 A
per group, negative terminals	8 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 20-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	2
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.12 VIP-PA-2X14/26/…/1756/064

4.12.1 Description

VIP-PA-50/26/…/1756/064 adapter cables connect up to 8 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 2x14-position system cable.

Table 2-3 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-15 provides field termination details.

A shield drain wire with a ring lug allows connection of the cable shield to a chassis ground.

Terminals are provided on the adapter for the Return (RTN) if not connected on the field termination board.

4.12.2 Wiring chart

Table 4-15 Field termination for VIP-PA-2X14/26/…/1756/064 cables

ControlLogix			Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-OF8 1756-OF8H**	**VIP-2/…/FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**Reference**	**Cable branch**
		Terminal marking	**Terminal marking**		
I/O point 0	1	VOUT-0	0.0	Termination board #1	Byte 0
	3	IOUT-0	0.1		
	5, 6, 15, 16	RTN	–		
I/O point 1	7	VOUT-1	0.2		
	9	IOUT-1	0.3		
	5, 6, 15, 16	RTN	–		
I/O point 2	11	VOUT-2	0.4		
	13	IOUT-2	0.5		
	5, 6, 15, 16	RTN	–		
I/O point 3	17	VOUT-2	0.6		
	19	IOUT-2	0.7		
	5, 6, 15, 16	RTN	–		
I/O point 4	2	VOUT-4	0.4	Termination board #2	Byte 1
	4	IOUT-4	–		
	5, 6, 15, 16	RTN	–		
I/O point 5	8	VOUT-5	0.5		
	10	IOUT-5	–		
	5, 6, 15, 16	RTN	–		
I/O point 6	12	VOUT-6	0.6		
	14	IOUT-6	–		
	5, 6, 15, 16	RTN	–		
I/O point 7	18	VOUT-7	0.7		
	20	IOUT-7	–		
	5, 6, 15, 16	RTN	–		

4.12.3 Technical data

Supply	
Maximum permissible operating voltage	60 V DC
Max. permissible current	
per path	1 A
total, RTN terminals	6A
External cable diameter	6.7 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 20-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	2
Pitch	2.54 mm
Number of positions	14
Return	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm^2/0.14 … 1.5 mm^2/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.13 VIP-PA-4X14/26/…/1756/040

4.13.1 Description

VIP-PA-4X14/26/…/1756/040 adapter cables connect up to 32 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 4x14-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-16 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 15), and 1+, 1- (I/O points 16 - 31), if not connected on the field termination board. A maximum current of 8 A per group (negative terminals) and 6 A (positive terminals) can be achieved, if wiring directly to the adapter.

Figure 4-19, Figure 4-20, and Figure 4-21 detail specific wiring options based on desired power configuration.

Table 4-16 Field termination for VIP-PA-4X14/26/…/1756/040 cables

ControlLogix			Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-IB32**	**VIP-2/…/FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8P/PLC**	**Cable branch**
		Terminal marking	**Terminal marking**		
I/O point 0	1	IN-0	0.0	See Figure 4-19	Byte 0
	17	GND-0	–		
I/O point 1	2	IN-1	0.1		
	17	GND-0	–		
I/O point 2	3	IN-2	0.2		
	17	GND-0	–		
I/O point 3	4	IN-3	0.3		
	17	GND-0	–		
I/O point 4	5	IN-4	0.4		
	17	GND-0	–		
I/O point 5	6	IN-5	0.5		
	17	GND-0	–		
I/O point 6	7	IN-6	0.6		
	17	GND-0	–		
I/O point 7	8	IN-7	0.7		
	17	GND-0	–		

Table 4-16 Field termination for VIP-PA-4X14/26/…/1756/040 cables [...]

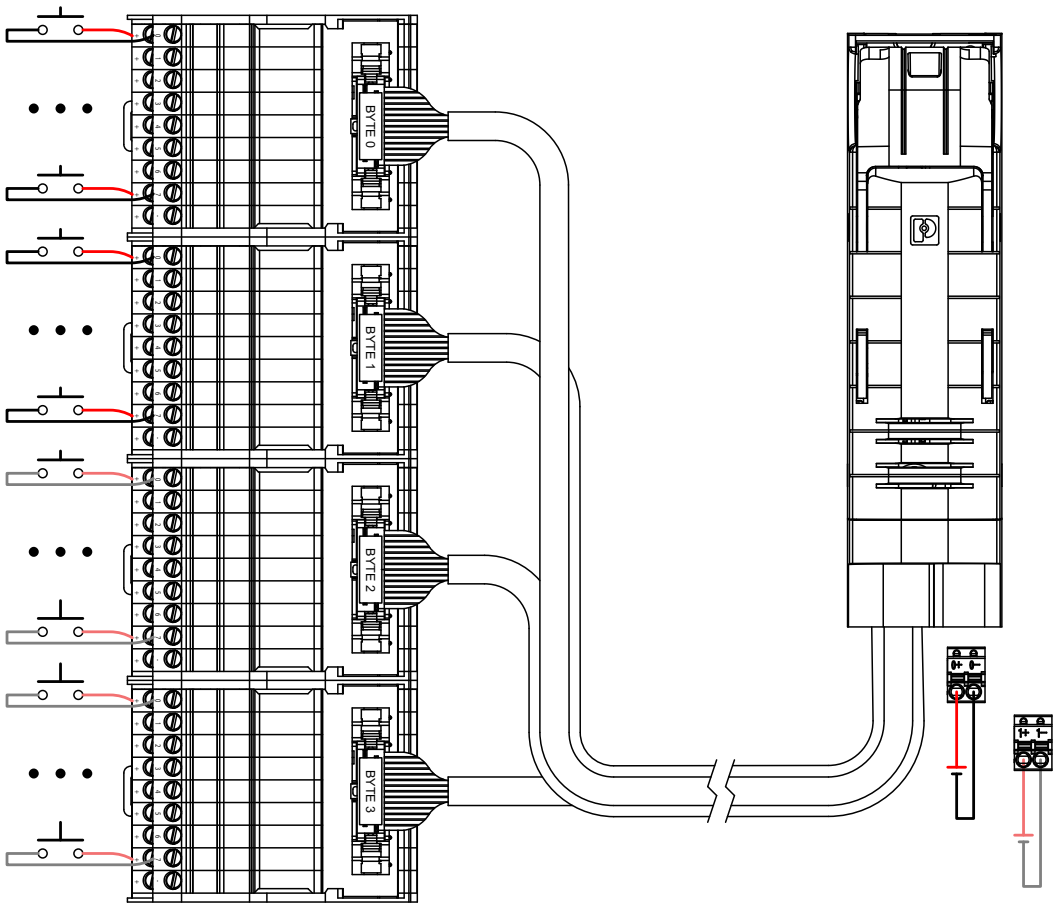
ControlLogix			Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-IB32**	**VIP-2/…/FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8P/PLC**	**Cable branch**
		Terminal marking	**Terminal marking**		
I/O point 8	9	IN-8	0.0	See Figure 4-19	Byte 1
	18	GND-0	–		
I/O point 9	10	IN-9	0.1		
	18	GND-0	–		
I/O point 10	11	IN-10	0.2		
	18	GND-0	–		
I/O point 11	12	IN-11	0.3		
	18	GND-0	–		
I/O point 12	13	IN-12	0.4		
	18	GND-0	–		
I/O point 13	14	IN-13	0.5		
	18	GND-0	–		
I/O point 14	15	IN-14	0.6		
	18	GND-0	–		
I/O point 15	16	IN-15	0.7		
	18	GND-0	–		
I/O point 16	19	IN-16	0.0	See Figure 4-19	Byte 2
	35	GND-1	–		
I/O point 17	20	IN-17	0.1		
	35	GND-1	–		
I/O point 18	21	IN-18	0.2		
	35	GND-1	–		
I/O point 19	22	IN-19	0.3		
	35	GND-1	–		
I/O point 20	23	IN-20	0.4		
	35	GND-1	–		
I/O point 21	24	IN-21	0.5		
	35	GND-1	–		
I/O point 22	25	IN-22	0.6		
	35	GND-1	–		
I/O point 23	26	IN-23	0.7		
	35	GND-1	–		

Table 4-16 Field termination for VIP-PA-4X14/26/…/1756/040 cables [...]

ControlLogix			Phoenix Contact		
A-B I/O point reference	**A-B pin**	**1756-IB32**	**VIP-2/…/FLK14/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/FLK14/8P/PLC**	**Cable branch**
		Terminal marking	**Terminal marking**		
I/O point 24	27	IN-24	0.0	See Figure 4-19	Byte 3
	36	GND-1	–		
I/O point 25	28	IN-25	0.1		
	36	GND-1	–		
I/O point 26	29	IN-26	0.2		
	36	GND-1	–		
I/O point 27	30	IN-27	0.3		
	36	GND-1	–		
I/O point 28	31	IN-28	0.4		
	36	GND-1	–		
I/O point 29	32	IN-29	0.5		
	36	GND-1	–		
I/O point 30	33	IN-30	0.6		
	36	GND-1	–		
I/O point 31	34	IN-31	0.7		
	36	GND-1	–		

For connection options to PLC V8… adapters and relay devices, refer to the current interface technology and switching devices catalog or the online configurator at phoenixcontact.com

Figure 4-19 VIP-PA-4X14/26/…/1756/040 wiring illustration (040 adapter)



VIP-2/…/FLK14/8P/PLC

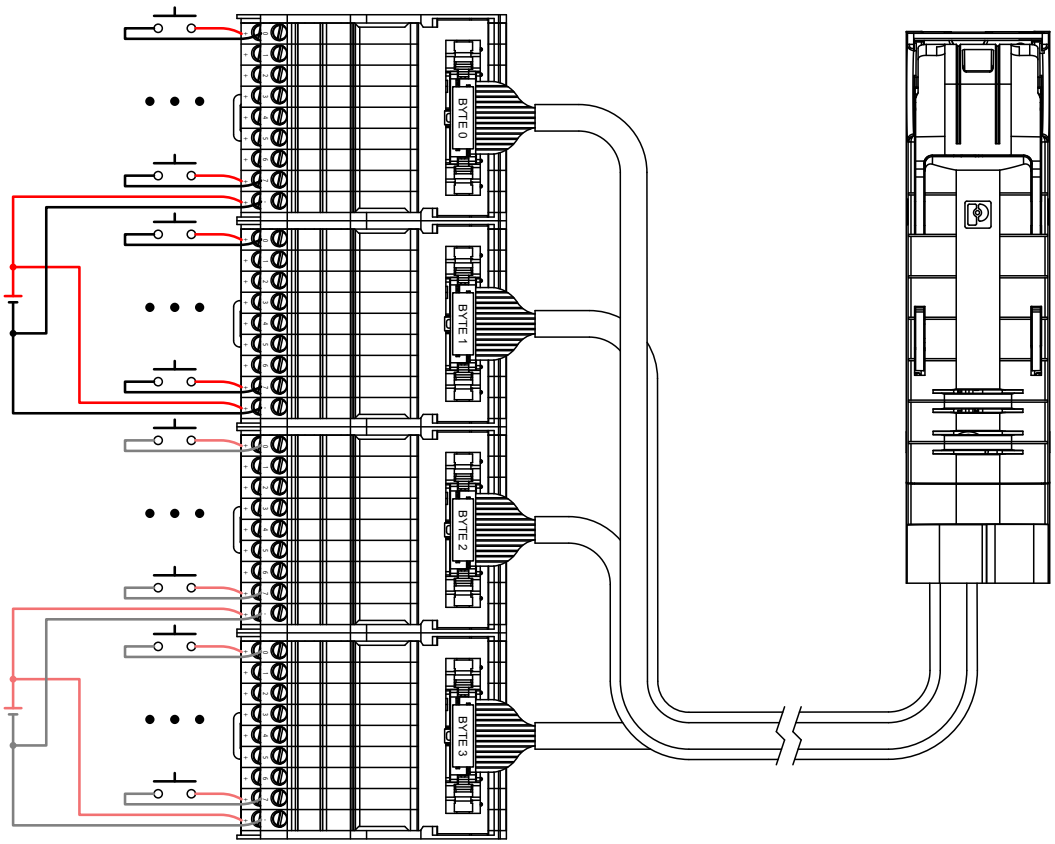
Max. permissible current	
Per branch	1 A
Separate power supply (per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-20 VIP-PA-4X14/26/…/1756/040 wiring illustration (040 field)



VIP-2/…/FLK14/8P/PLC

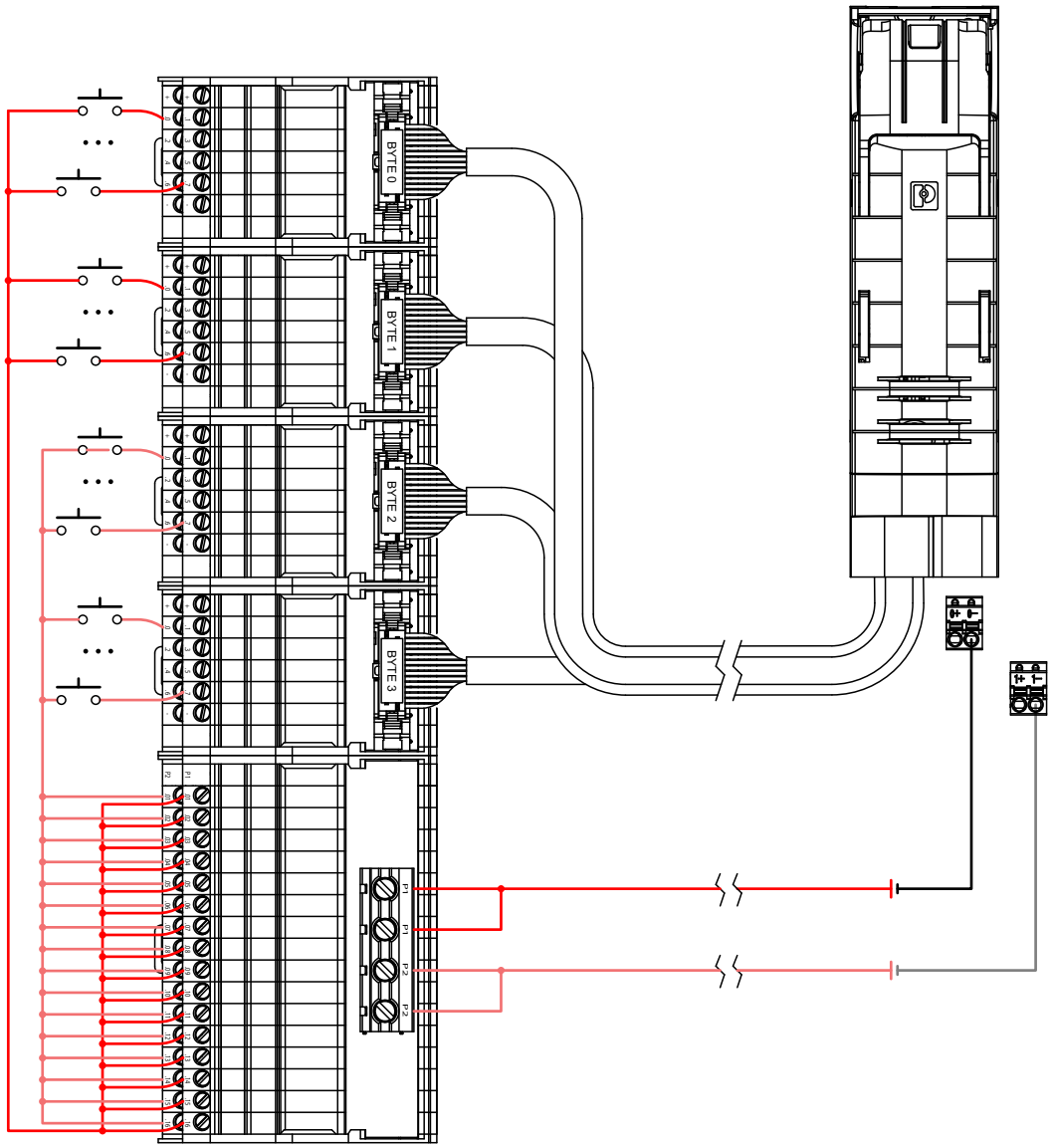
Max. permissible current	
Per branch	1 A
Separate power supply (per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-21 VIP-PA-4X14/26/…/1756/040 wiring illustration (040 max)



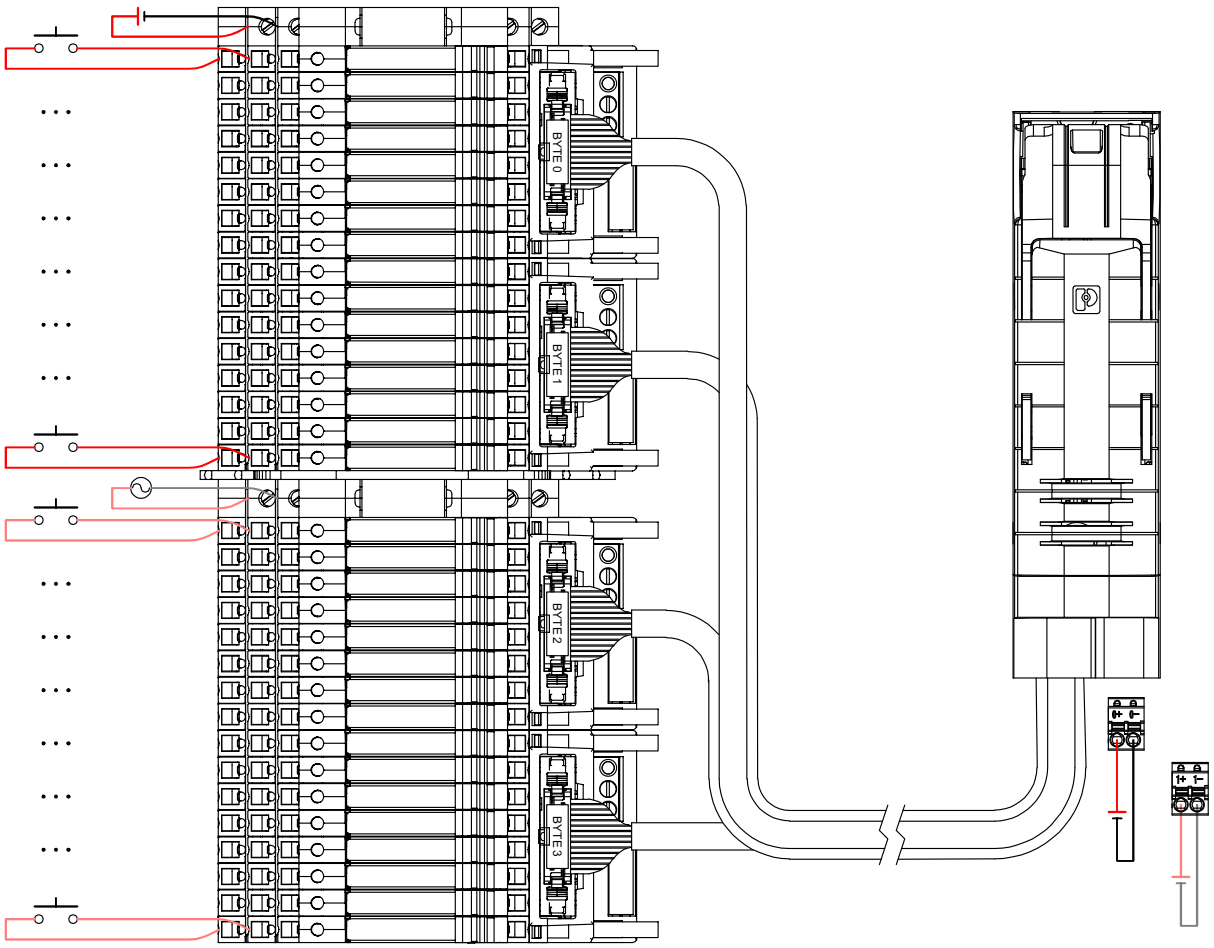
VIP-2/…/FLK14/PLC	
Max. permissible current, per branch	1 A
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current, per potential	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 8 A

Figure 4-22 VIP-PA-4X14/26/…/1756/040 wiring illustration (040 V8 adapter)

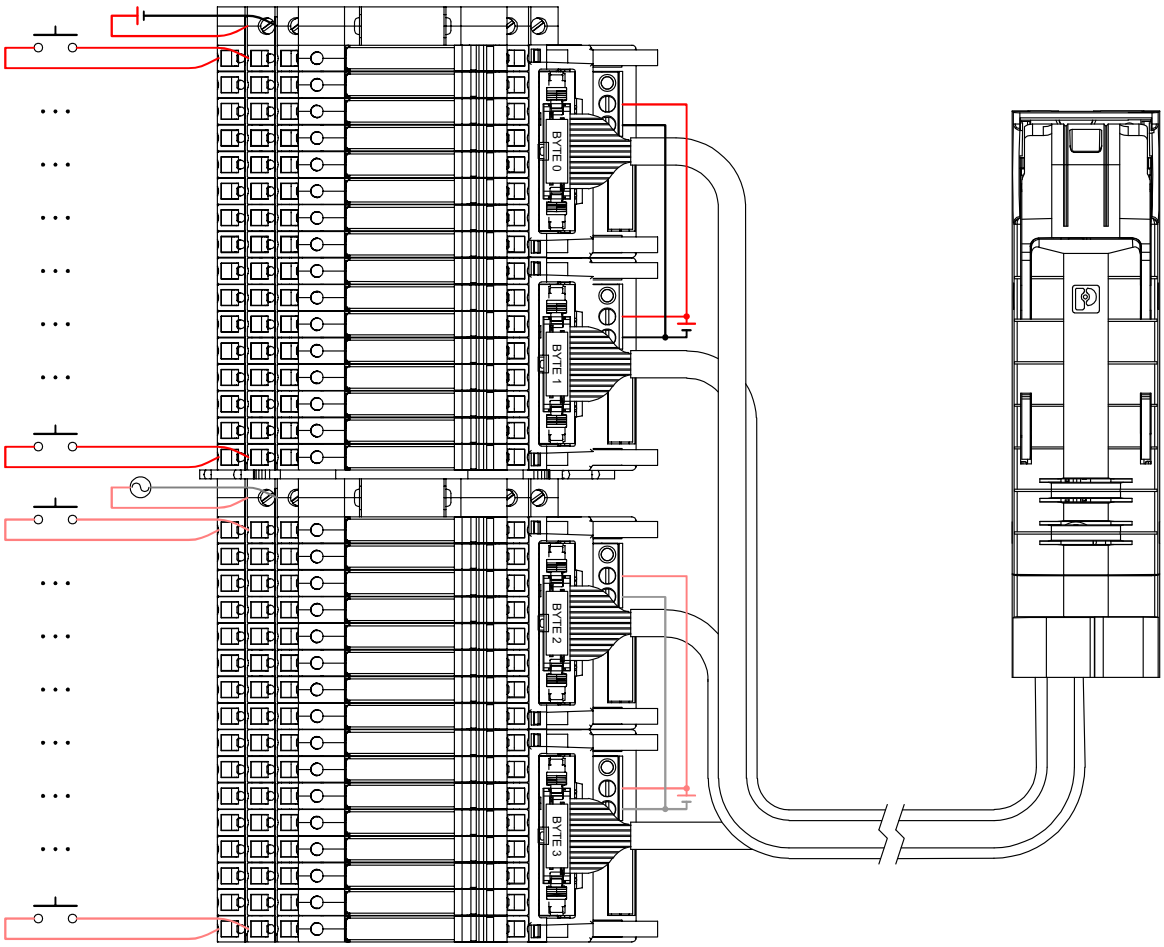


PLC-RPT-24DC/ 1AU/SEN (Item No. 2900313)	Option: 24 V DC signal inputs
Nominal input current at U_N	24 V DC
Typical input current at U_N	9 mA
PLC-RPT-120UC/ 1AU/SEN (Item No. 2900314)	Option: 120 V AC signal inputs
Nominal input current at U_N	120 V AC 110 V DC
Typical input current at U_N	3.5 mA
PLC-V8/FLK/IN (Item No. 2296553)	
Max. permissible current, per branch	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-23 VIP-PA-4X14/26/…/1756/040 wiring illustration (040 V8 field)



PLC-RPT-24DC/ 1AU/SEN (Item No. 2900313)	Option: 24 V DC signal inputs
Nominal input current at U_N	24 V DC
Typical input current at U_N	9 mA
PLC-RPT-120UC/ 1AU/SEN (Item No. 2900314)	Option: 120 V AC signal inputs
Nominal input current at U_N	120 V AC 110 V DC
Typical input current at U_N	3.5 mA
PLC-V8/FLK/IN (Item No. 2296553)	
Max. permissible current, per branch	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

4.13.2 Technical data

Supply	
Maximum permissible operating voltage	60 V DC
Max. permissible current	
Per path	1 A
Per group, positive terminals	6 A
Per group, negative terminals	8 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	4
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

4.14 VIP-PA-4X14/26/…/1756/041

4.14.1 Description

VIP-PA-4X14/26/…/1756/041 adapter cables connect up to 32 channels directly to a ControlLogix 1756 I/O module whose switching voltage does not exceed 60 V DC and 1 A per channel. Byte-by-byte connection to the field is achieved via a 4x14-position system cable.

Table 2-2 details applicable ControlLogix 1756 I/O modules that can connect to this cable adapter family along with field termination options for connection to the field level.

Table 4-17 provides field termination details.

Power terminals are provided on the adapter for 0+, 0- (I/O points 0 - 15), and 1+, 1- (I/O points 16 - 31), if not connected on the field termination board. A maximum current of 8 A per group can be achieved, if wiring directly to the adapter.

Figure 4-19, Figure 4-20, and Figure 4-21 detail specific wiring options based on desired power configuration.

Table 4-17 Field termination for VIP-PA-4X14/26/…/1756/041 cables

ControlLogix			Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OB32 1756-OV32E**	**VIP-2/…/FLK14/PLC VIP-2/… /FLK14/LED/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/ FLK14/8P/PLC**	**…/-V8 and relay wiring**	**Cable branch**
		Terminal marking	**Terminal marking**			
I/O point 0	1	OUT-0	0.0	See Figure 4-24	Termination board #1	Byte 0
	17	RTN OUT-0	–			
I/O point 1	2	OUT-1	0.1			
	17	RTN OUT-0	–			
I/O point 2	3	OUT-2	0.2			
	17	RTN OUT-0	–			
I/O point 3	4	OUT-3	0.3			
	17	RTN OUT-0	–			
I/O point 4	5	OUT-4	0.4			
	17	RTN OUT-0	–			
I/O point 5	6	OUT-5	0.5			
	17	RTN OUT-0	–			
I/O point 6	7	OUT-6	0.6			
	17	RTN OUT-0	–			
I/O point 7	8	OUT-7	0.7			
	17	RTN OUT-0	–			

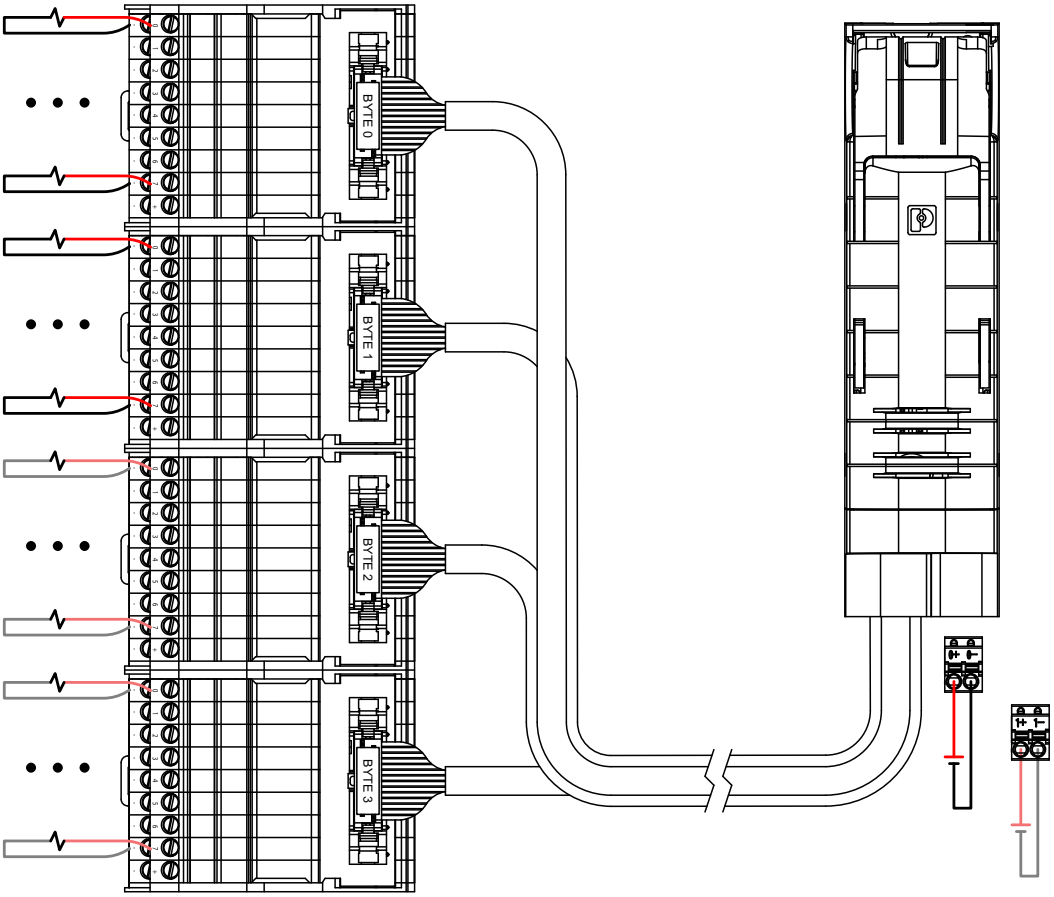
Table 4-17 Field termination for VIP-PA-4X14/26/…/1756/041 cables [...]

ControlLogix			Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OB32 1756-OV32E**	**VIP-2/…/FLK14/PLC VIP-2/… /FLK14/LED/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/ FLK14/8P/PLC**	**…/-V8 and relay wiring**	**Cable branch**
		Terminal marking	**Terminal marking**			
I/O point 8	9	OUT-8	0.0	See Figure 4-24	Termination board #2	Byte 1
	17	RTN OUT-0	–			
I/O point 9	10	OUT-9	0.1			
	17	RTN OUT-0	–			
I/O point 10	11	OUT-10	0.2			
	17	RTN OUT-0	–			
I/O point 11	12	OUT-11	0.3			
	17	RTN OUT-0	–			
I/O point 12	13	OUT-12	0.4			
	17	RTN OUT-0	–			
I/O point 13	14	OUT-13	0.5			
	17	RTN OUT-0	–			
I/O point 14	15	OUT-14	0.6			
	17	RTN OUT-0	–			
I/O point 15	16	OUT-15	0.7			
	17	RTN OUT-0	–			
I/O point 16	19	OUT-16	0.0	See Figure 4-24	Termination board #3	Byte 2
	35	RTN OUT-1	–			
I/O point 17	20	OUT-17	0.1			
	35	RTN OUT-1	–			
I/O point 18	21	OUT-18	0.2			
	35	RTN OUT-1	–			
I/O point 19	22	OUT-19	0.3			
	35	RTN OUT-1	–			
I/O point 20	23	OUT-20	0.4			
	35	RTN OUT-1	–			
I/O point 21	24	OUT-21	0.5			
	35	RTN OUT-1	–			
I/O point 22	25	OUT-22	0.6			
	35	RTN OUT-1	–			
I/O point 23	26	OUT-23	0.7			
	35	RTN OUT-1	–			

Table 4-17 Field termination for VIP-PA-4X14/26/…/1756/041 cables [...]

ControlLogix			Phoenix Contact			
A-B I/O point reference	**A-B pin**	**1756-OB32 1756-OV32E**	**VIP-2/…/FLK14/PLC VIP-2/… /FLK14/LED/PLC FLKM 14/KDS3-MT/PPA/PLC VFC-PT/FLK14/PLC**	**VIP-2/…/ FLK14/8P/PLC**	**…/-V8 and relay wiring**	**Cable branch**
		Terminal marking	**Terminal marking**			
I/O point 24	27	OUT-24	0.0	See Figure 4-24	Termina-tion board #4	Byte 3
	35	RTN OUT-1	–			
I/O point 25	28	OUT-25	0.1			
	35	RTN OUT-1	–			
I/O point 26	29	OUT-26	0.2			
	35	RTN OUT-1	–			
I/O point 27	30	OUT-27	0.3			
	35	RTN OUT-1	–			
I/O point 28	31	OUT-28	0.4			
	35	RTN OUT-1	–			
I/O point 29	32	OUT-29	0.5			
	35	RTN OUT-1	–			
I/O point 30	33	OUT-30	0.6			
	35	RTN OUT-1	–			
I/O point 31	34	OUT-31	0.7			
	35	RTN OUT-1	–			
	18	DC-0+				
	36	DC-1+				

Figure 4-24 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Adapter OB32)



VIP-2/…/FLK14/8P/PLC

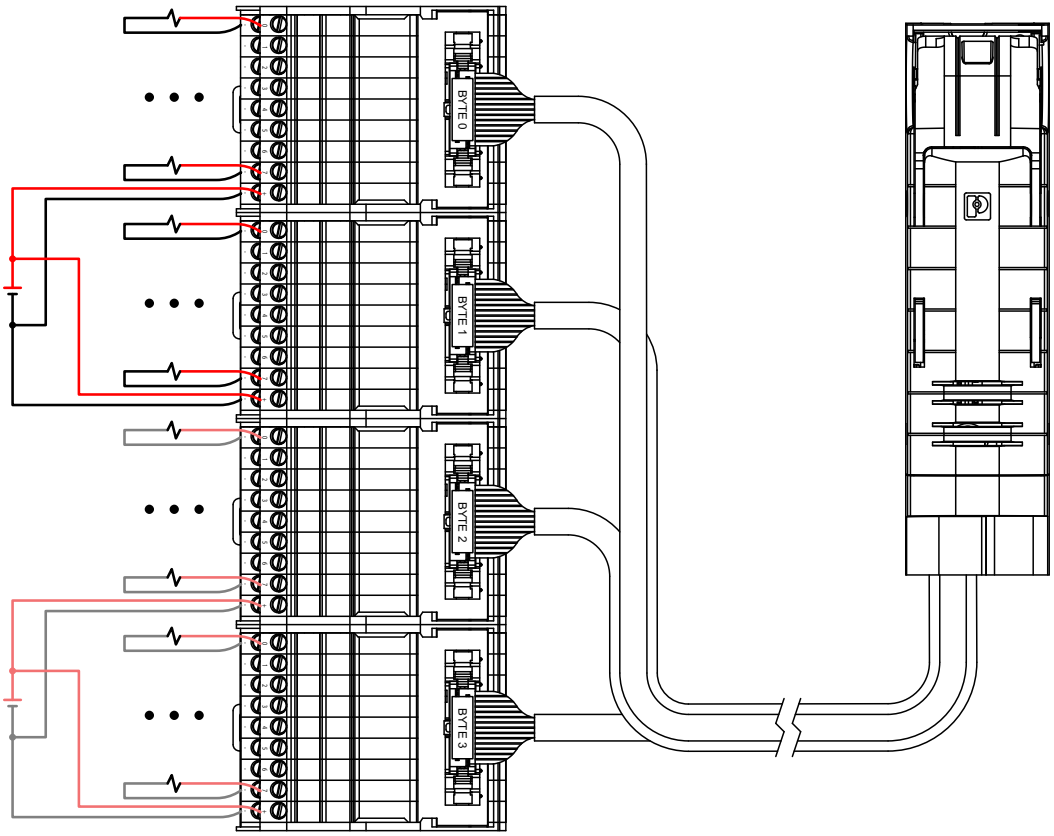
Max. permissible current	
Per branch	1 A
Separate power supply (per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-25 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Field OB32)



VIP-2/…/FLK14/8M/PLC

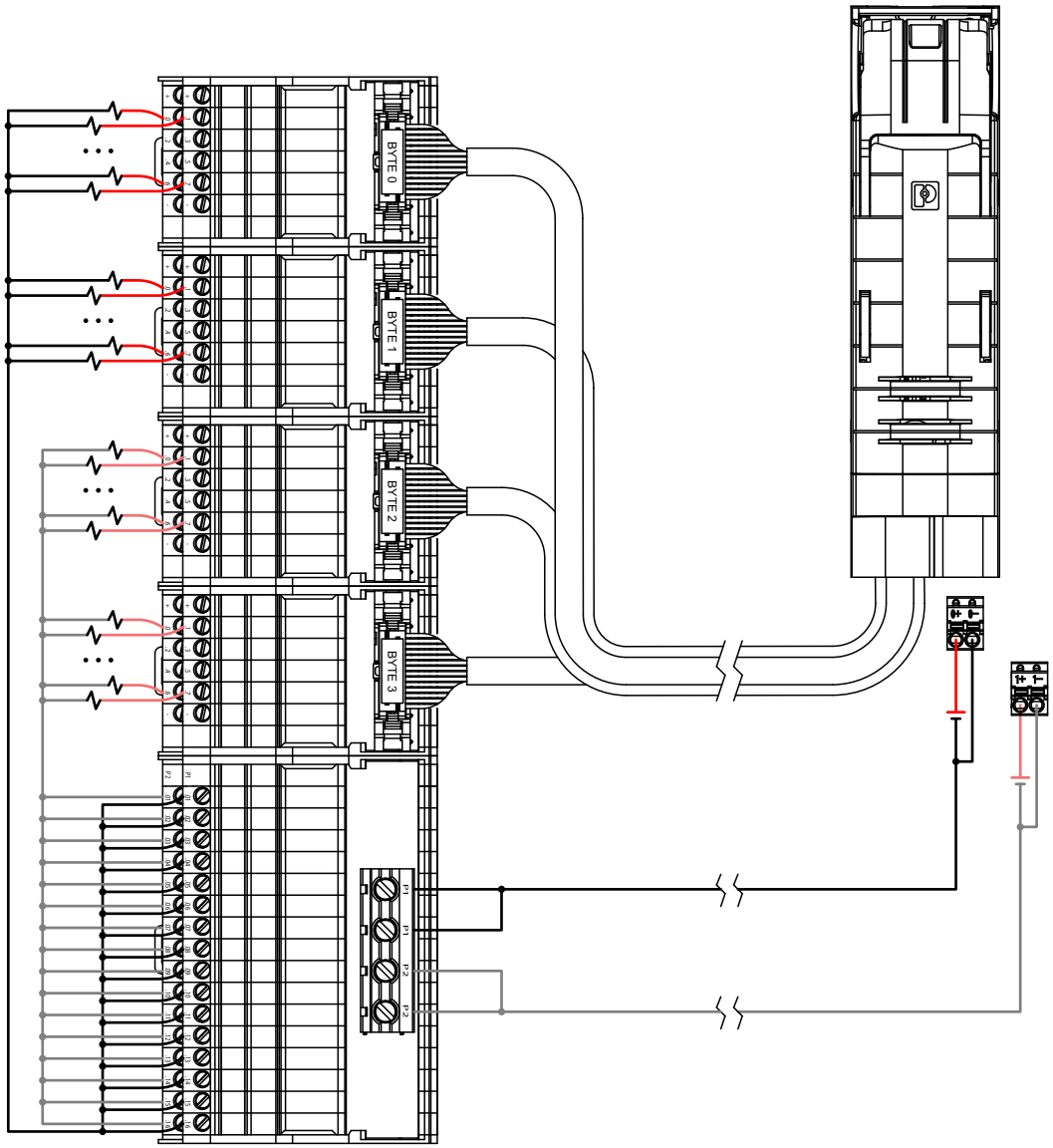
Max. permissible current	
Per branch	1 A
Separate power supply (per byte)	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-26 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Max OB32)



VIP-2/…/FLK14/PLC	
Max. permissible current. per branch	1 A

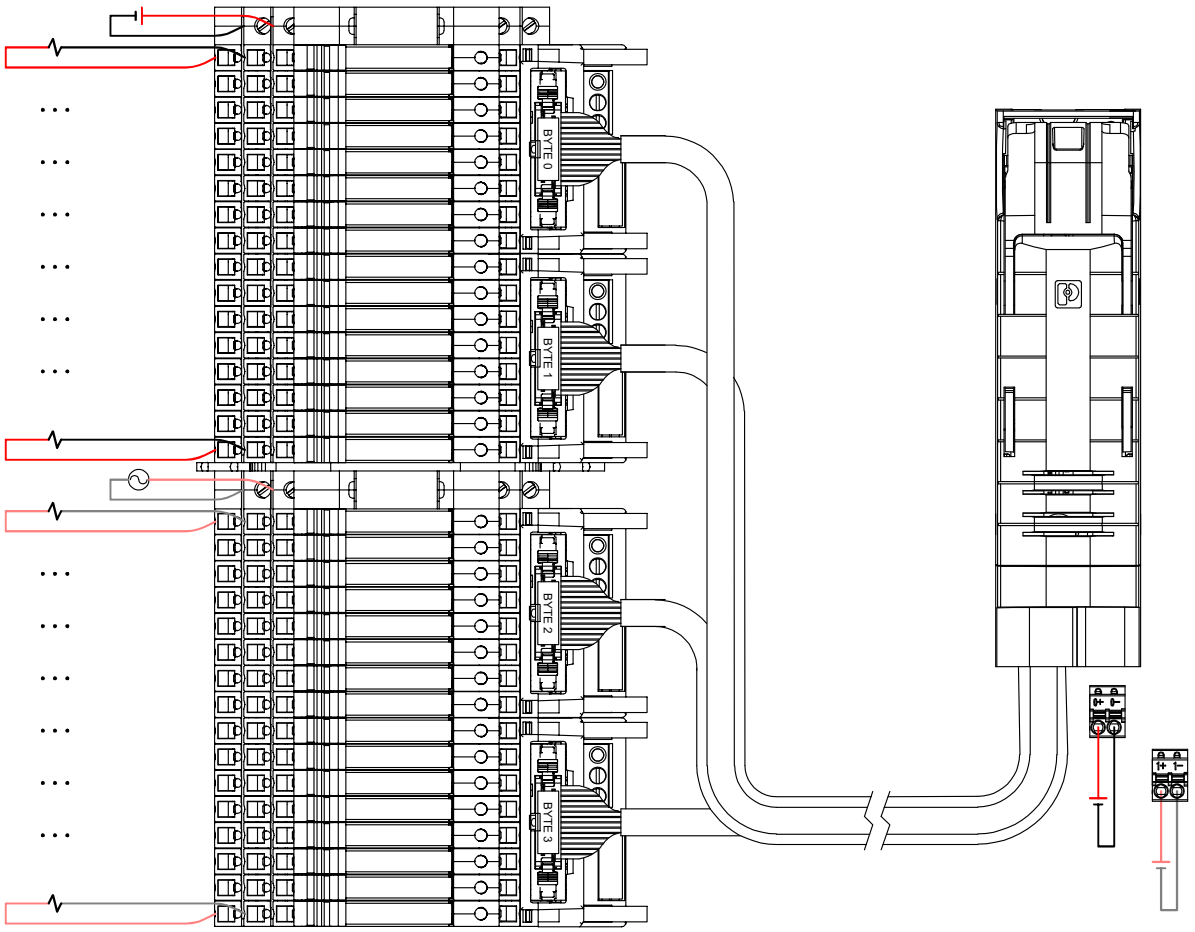
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current (per potential)	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 8 A

Figure 4-27 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Adapter)

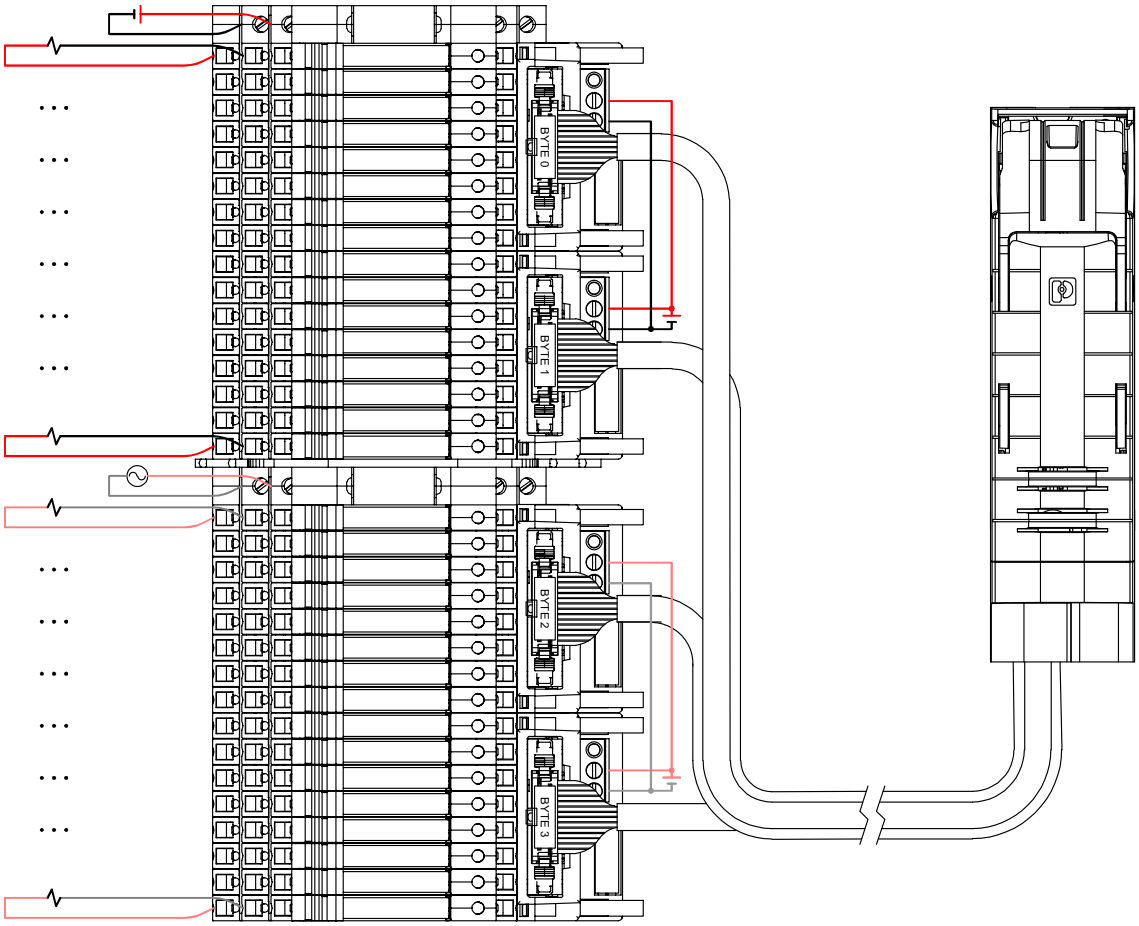


PLC-RPT-24DC/1/ACT (Item No. 2900312)	
Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT (Item No. 2295554)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-28 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 Field OB32)

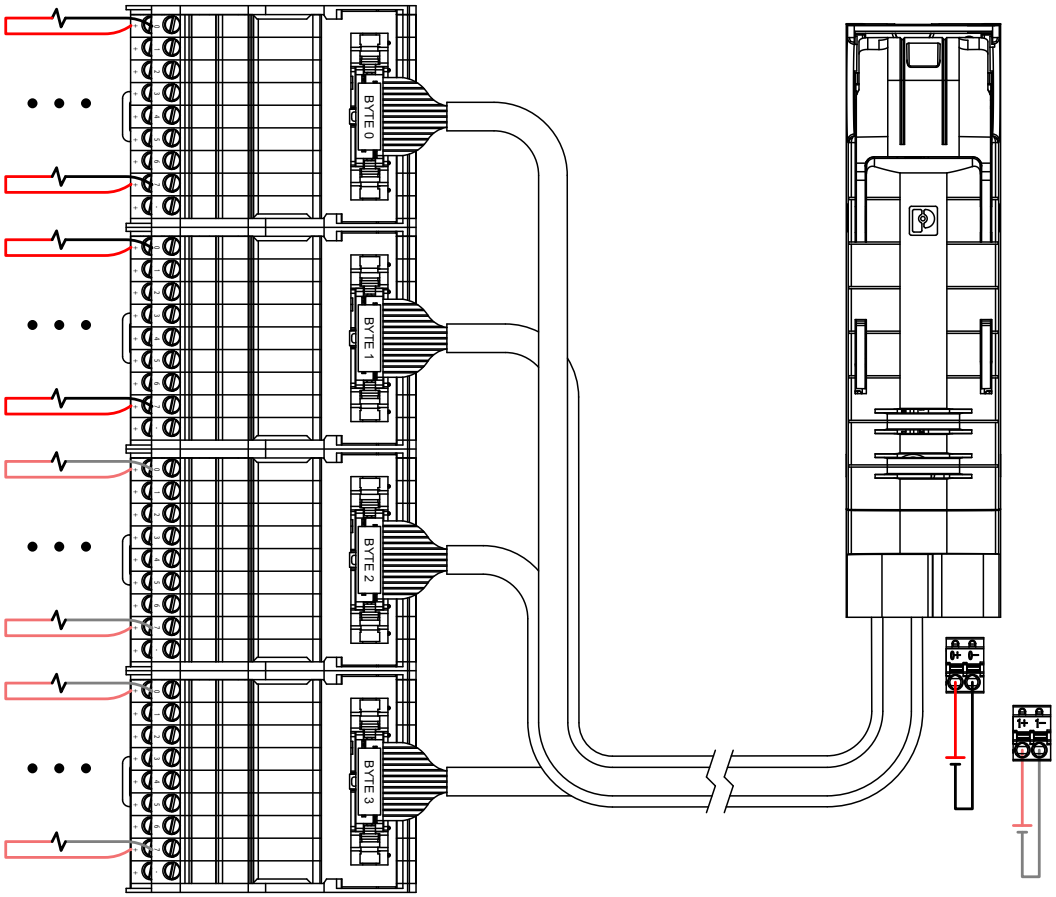


PLC-RPT-24DC/1/ACT (Item No. 2900312)	
Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT (Item No. 2295554)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-29 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Adapter OV32E)



VIP-2/…/FLK14/8P/PLC

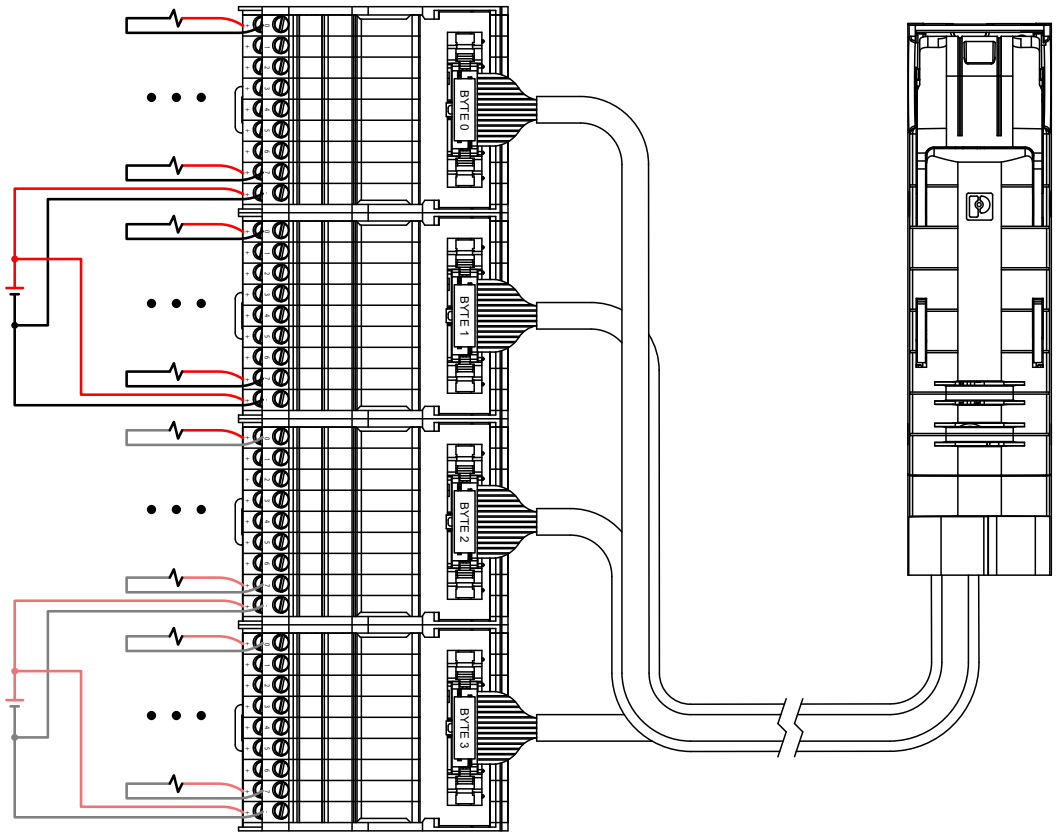
Max. permissible current	
Per branch	1 A
Separate power supply (per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-30 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Field OV32E)



VIP-2/…/FLK14/8P/PLC

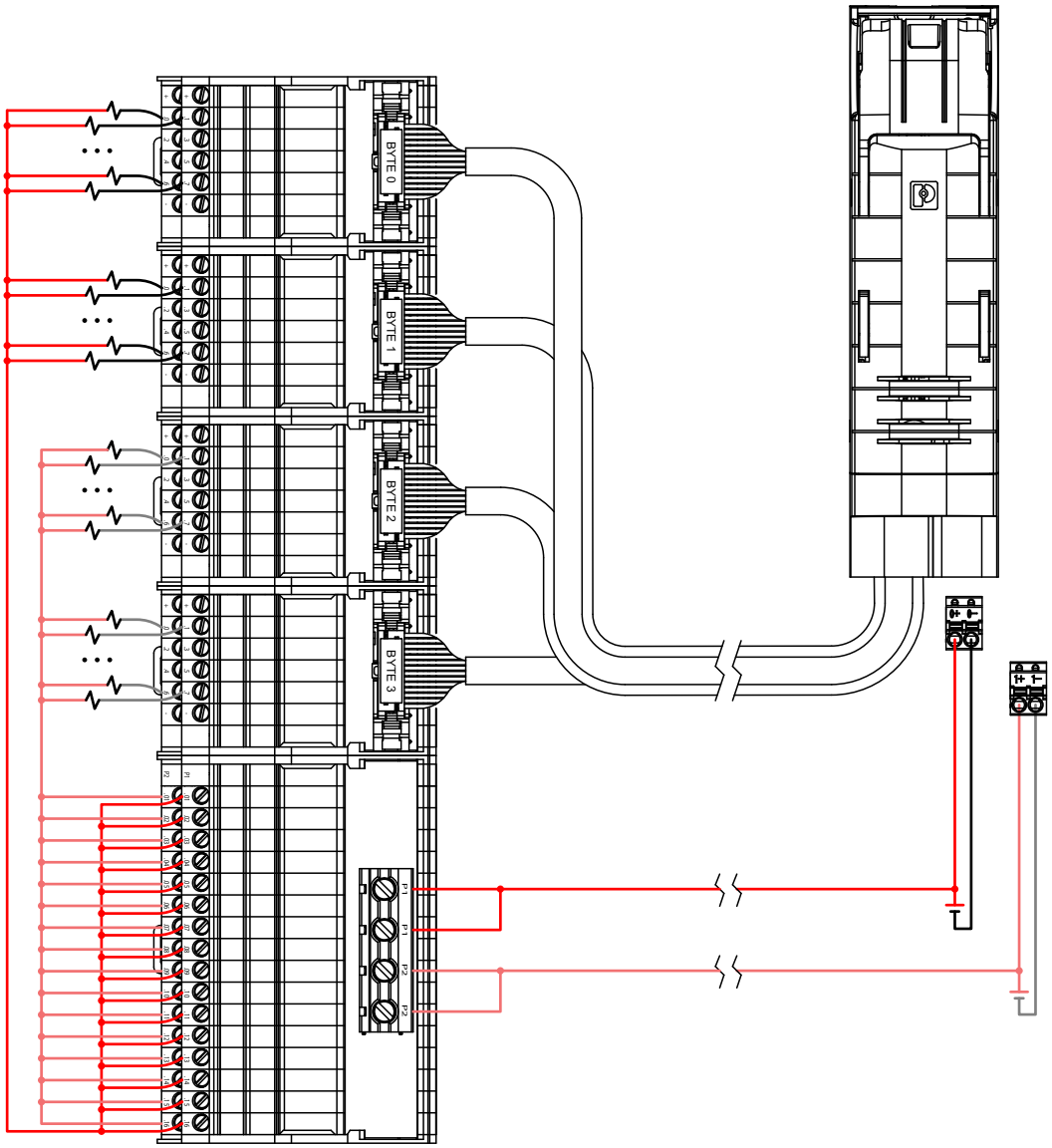
Max. permissible current	
Per branch	1 A
Separate power supply (per byte	3 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 6 A (3 A per byte)

Figure 4-31 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Max OV32E)



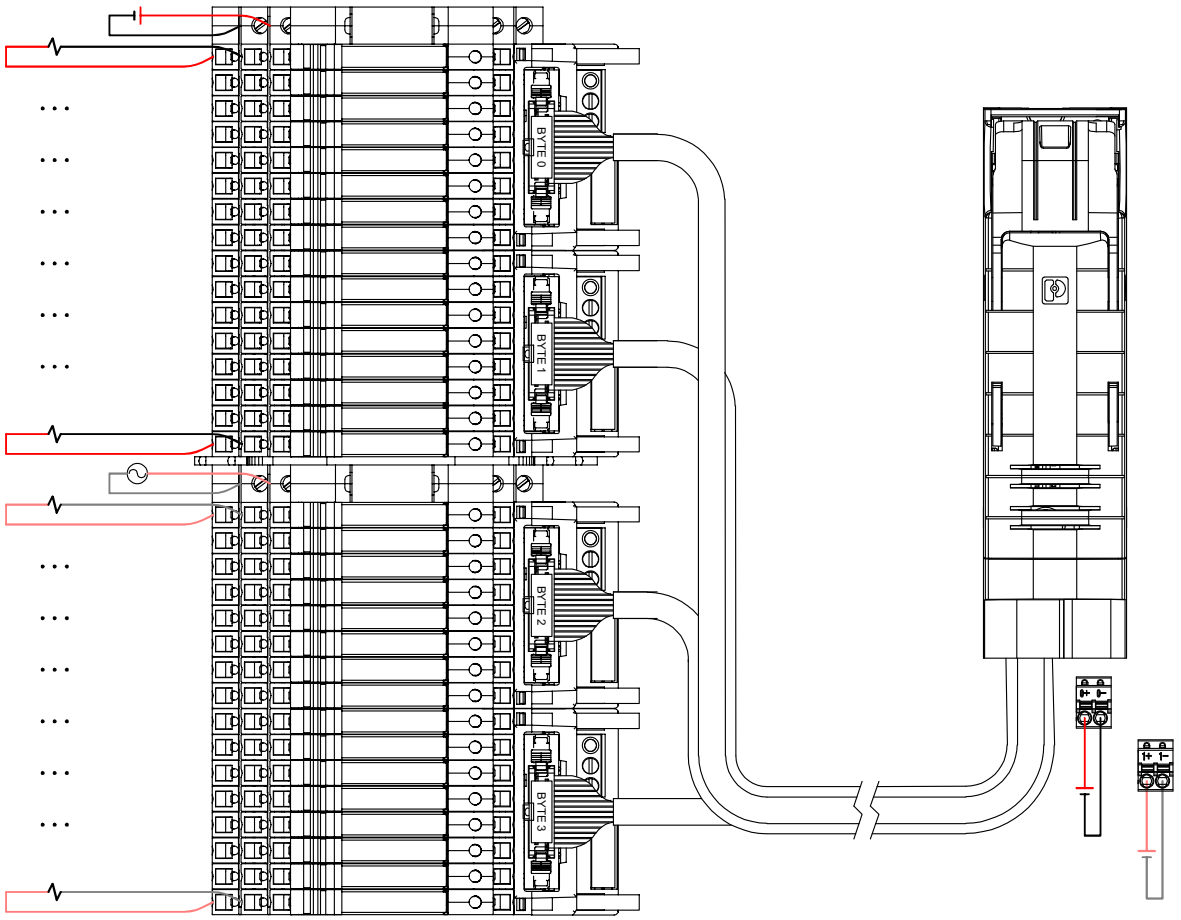
VIP-2/…/FLK14/PLC	
Max. permissible current. per branch	1 A
VIP-2/SC/PDM-2/32	
Max. permissible current, per branch	15 A
Total current (per potential)	30 A

Application notes:

Maximum permissible current (per branch) is 1 A

Maximum permissible current (per group) is 8 A

Figure 4-32 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Adapter)



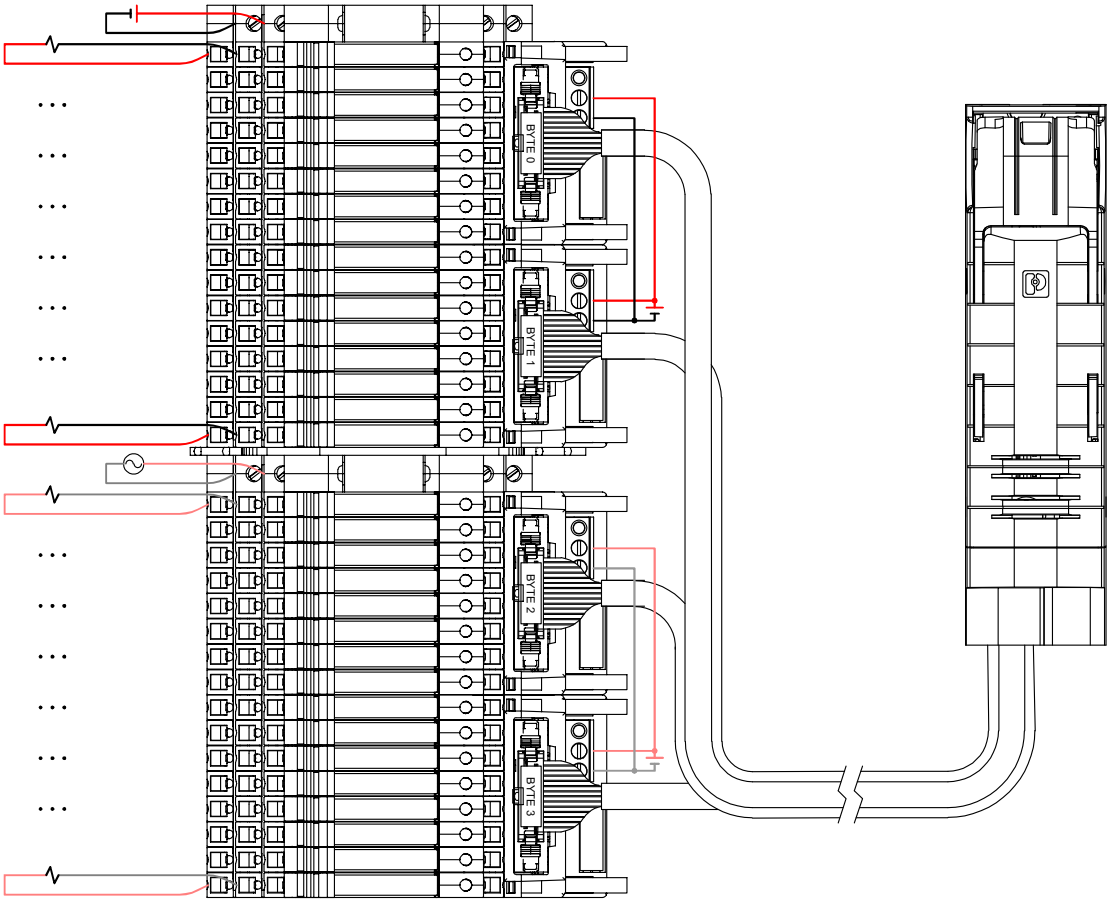
PLC-RPT-24DC/1/ACT (Item No. 2900312)

Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT/M (Item No. 2304102)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

Figure 4-33 VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Field)



PLC-RPT-24DC/1/ACT (Item No. 2900312)	
Coil side	
Nominal input voltage U_N	24 V DC
Typical input current at U_N	9 mA
Switching	
Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
PLC-V8/FLK14/OUT (Item No. 229554)	
Maximum permissible current (per branch)	1 A
Maximum total current (voltage supply)	3 A

Application notes:

There are many possible combinations of PLC relay components that may be valid options. The version depicted here is one of the more common possible applications. Please refer to the Phoenix Contact Interface catalog for additional suggestions.

4.14.2 Technical data

Supply	
Maximum permissible operating voltage	60 V AC
Max. permissible current	
Per path	1 A
Per group, positive terminals	8A
Per group, negative terminals	8 A
External cable diameter	6.4 mm ±0.4 mm
AWG signal line	26
Cable resistance	≤145 Ω/km (20°C)

Connection data	
Controller level	
Type	Plug in connection for 36-pos. I/O
Field level	
Connection method	IDC/FLK socket strip
Number of connections	4
Pitch	2.54 mm
Number of positions	14
Supply	
Connection method	Plug in/plug connection
Stripping length	9 mm
Conductor cross section, sold/stranded/AWG	0.14 … 1.5 mm²/0.14 … 1.5 mm²/26…16

General data	
Ambient temperature range, operation	0 … 60°C
Ambient temperature range, Storage/transport	0 … 80°C
Permissible humidity (operation)	0…95%, non-condensing
Altitude	≤2000 m
Pollution degree	2
Overvoltage category	II
Degree of protection	IP20
Standards/regulations	UL 61010-2-201

A Appendixes

A 1 List of figures

Section 2

Figure 2-1: Portfolio overview 9
Figure 2-2: Field termination overview 10

Section 3

Figure 3-1: Typical adapter attributes 15
Figure 3-2: Side view showing lever in the disconnect position 16

Section 4

Figure 4-1: VIP-PA-50/26/.../1756/021 wiring illustration (021 adapter) 26
Figure 4-2: VIP-PA-50/26/…/1756/024 wiring illustration (024 adapter) 39
Figure 4-3: VIP-PA-2X14/26/…/1756/060 wiring illustration (060 adapter) 43
Figure 4-4: VIP-PA-2X14/26/…/1756/060 wiring illustration (060 field) 44
Figure 4-5: VIP-PA-2X14/26/…/1756/060 wiring illustration (060 max) 45
Figure 4-6: VIP-PA-2X14/26/…/1756/061 wiring illustration (061 adapter) 49
Figure 4-7: VIP-PA-2X14/26/…/1756/061 wiring illustration (061 field) 50
Figure 4-8: VIP-PA-2X14/26/…/1756/061 wiring illustration (061 max) 51
Figure 4-9: VIP-PA-2X14/26/…/1756/062 wiring illustration (062 adapter) 56
Figure 4-10: VIP-PA-2X14/26/…/1756/062 wiring illustration (062 field) 57
Figure 4-11: VIP-PA-2X14/26/…/1756/062 wiring illustration (062 max) 58
Figure 4-12: VIP-PA-2X14/26/…/1756/062 wiring illustration (062 V8 adapter) 59
Figure 4-13: VIP-PA-2X14/26/…/1756/062 wiring illustration (062 V8 field) 60
Figure 4-14: VIP-PA-2X14/26/…/1756/063 wiring illustration (063 adapter) 65
Figure 4-15: VIP-PA-2X14/26/…/1756/063 wiring illustration (063 field) 66
Figure 4-16: VIP-PA-2X14/26/…/1756/063 wiring illustration (063 max) 67
Figure 4-17: VIP-PA-2X14/26/…/1756/063 wiring illustration (063 V8 ACT adapter) 68
Figure 4-18: VIP-PA-2X14/26/…/1756/063 wiring illustration (063 V8 ACT field) 69
Figure 4-19: VIP-PA-4X14/26/…/1756/040 wiring illustration (040 adapter) 77
Figure 4-20: VIP-PA-4X14/26/…/1756/040 wiring illustration (040 field) 78
Figure 4-21: VIP-PA-4X14/26/…/1756/040 wiring illustration (040 max) 79
Figure 4-22: VIP-PA-4X14/26/…/1756/040 wiring illustration (040 V8 adapter) 80

Figure 4-23: VIP-PA-4X14/26/…/1756/040 wiring illustration (040 V8 field) 81
Figure 4-24: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Adapter OB32) 86
Figure 4-25: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Field OB32) 87
Figure 4-26: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Max OB32) 88
Figure 4-27: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Adapter) 89
Figure 4-28: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 Field OB32) 90
Figure 4-29: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Adapter OV32E) 91
Figure 4-30: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Field OV32E) .. 92
Figure 4-31: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 Max OV32E) ... 93
Figure 4-32: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Adapter) 94
Figure 4-33: VIP-PA-4X14/26/…/1756/041 wiring illustration (041 V8 ACT Field) .. 95

Appendix A

A 2 List of tables

Section 2

Table 2-1: ControlLogix modules to open-end cables cross list 11

Table 2-2: High-density ControlLogix modules cables cross list 12

Table 2-3: Low-density ControlLogix modules cables cross list 14

Section 4

Table 4-1: Field termination wiring - VIP-PA-PWR/36XOE/…/1756 to open end .. 17

Table 4-2: Field termination wiring - VIP-PA-PWR/20XOE/…/1756 to open end .. 19

Table 4-3: Field termination for VIP-PA-50/26/…/1756/020 cables 21

Table 4-4: Field termination for VIP-PA-50/26/…/1756/021 cables 24

Table 4-5: Field termination for VIP-PA-50/26/…/1756/022 cables differential current/voltage 29

Table 4-6: Field termination for VIP-PA-50/26/…/1756/022 cables single-ended current 30

Table 4-7: Field termination for VIP-PA-50/26/…/1756/022 cables for single-ended voltage 31

Table 4-8: Field termination for VIP-PA-50/26/…/1756/022 cables for differential current 32

Table 4-9: Field termination for VIP-PA-50/26/…/1756/023 cables 35

Table 4-10: Field termination for VIP-PA-50/26/…/1756/024 cables 37

Table 4-11: Field termination for VIP-PA-2X14/26/…/1756/060 cables 42

Table 4-12: Field termination for VIP-PA-2X14/26/…/1756/061 cables 48

Table 4-13: Field termination for VIP-PA-2X14/26/…/1756/062 cables 54

Table 4-14: Field termination for VIP-PA-2X14/26/…/1756/063 cables 63

Table 4-15: Field termination for VIP-PA-2X14/26/…/1756/064 cables 72

Table 4-16: Field termination for VIP-PA-4X14/26/…/1756/040 cables 74

Table 4-17: Field termination for VIP-PA-4X14/26/…/1756/041 cables 83

Please observe the following notes

General terms and conditions of use for technical documentation

Phoenix Contact reserves the right to alter, correct, and/or improve the technical documentation and the products described in the technical documentation at its own discretion and without giving prior notice, insofar as this is reasonable for the user. The same applies to any technical changes that serve the purpose of technical progress.

The receipt of technical documentation (in particular user documentation) does not constitute any further duty on the part of Phoenix Contact to furnish information on modifications to products and/or technical documentation. You are responsible to verify the suitability and intended use of the products in your specific application, in particular with regard to observing the applicable standards and regulations. All information made available in the technical data is supplied without any accompanying guarantee, whether expressly mentioned, implied or tacitly assumed.

In general, the provisions of the current standard Terms and Conditions of Phoenix Contact apply exclusively, in particular as concerns any warranty liability.

Phoenix Contact reserves the right to register its own intellectual property rights for the product identifications of Phoenix Contact products that are used here. Registration of such intellectual property rights by third parties is prohibited.

Other product identifications may be afforded legal protection, even where they may not be indicated as such.

How to contact us

Internet

Up-to-date information on Phoenix Contact products and our Terms and Conditions can be found on the Internet at:
phoenixcontact.com

Make sure you always use the latest documentation.
It can be downloaded at:
phoenixcontact.net/products

Subsidiaries

If there are any problems that cannot be solved using the documentation, please contact your Phoenix Contact subsidiary.
Subsidiary contact information is available at phoenixcontact.com.

Published by

Phoenix Contact GmbH & Co. KG
Flachsmarktstraße 8
32825 Blomberg
GERMANY

Phoenix Contact Development and Manufacturing, Inc.
586 Fulling Mill Road
Middletown, PA 17057
USA

Should you have any suggestions or recommendations for improvement of the contents and layout of our manuals, please send your comments to:
tecdoc@phoenixcontact.com