Products

DIGITAL I/O

B-02

Product Lineup / Basic Knowledge

PCI

Compact PCI

PC Card

USB

Product Lineup (ISA)

ISA

[Product Lineup]

●PCI

Name	Char	nnels	Signal Level	Response Time	Isolation	Internal	Input		
INAITIE	Input	Output	Signal Level	nesponse rime	ISUIAUUII	Power	Circuit	Resistance	
Opto-Isolated									
PI-32L(PCI)H	32	_	+12~24VDC	Max. 200µsec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PI-32L(PCI)	32	_	+12~24VDC	Max. 1msec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	
PI-64L(PCI)H	64	-	+12~24VDC	Max. 200µsec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PI-64L(PCI)	64	_	+12~24VDC	Max. 1msec	Y	-	Opto-Isolated (for current source output) (Negative logic)	3kΩ	
PI-128L(PCI)	128	_	+12~24VDC	Max. 200µsec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PO-32L(PCI)H	_	32	+12~24VDC	Max. 200µsec	Υ	_	_	_	
PO-32L(PCI)	_	32	+12~24VDC	Max. 1msec	Υ	_	_	_	
PO-64L(PCI)H	_	64	+12~24VDC	Max. 200µsec	Υ	_	_	_	
PO-64L(PCI)		64	+12~24VDC	Max. 1msec	Υ	-	_	_	
PO-128L(PCI)	_	128	+12~24VDC	Max. 200µsec	Υ	_	_	_	
PIO-16/16L(LPCI)H	16	16	+12~24VDC	Max. 200µsec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PIO-16/16L(PCI)H	16	16	+12~24VDC	Max. 200µsec	Υ	-	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PIO-16/16L(PCI)	16	16	+12~24VDC	Max. 1msec	Υ	-	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	
PIO-32/32L(PCI)H	32	32	+12~24VDC	Max. 200µsec	Υ	-	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PIO-32/32L(PCI)	32	32	+12~24VDC	Max. 1msec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	
PIO-64/64L(PCI)	64	64	+12~24VDC	Max. 200µsec	Υ		Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
Opto-Isolated High-speed									
PIO-32/32F(PCI)	32	32	12~24VDC	Max. 5µsec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	2.2kΩ	
Opto-Isolated with On-board 12V Pow	er Supp	oly							
PI-32B(PCI)H	32	_	12~24VDC	Max. 200µsec	Υ	12VDC	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PI-32B(PCI)	32	_	12~24VDC	Max. 1msec	Υ	12VDC	Opto-Isolated (for current source output) (Negative logic)	3kΩ	
PO-32B(PCI)H		32	12~24VDC	Max. 200µsec	Υ	12VDC	_	4.7kΩ	
PO-32B(PCI)	_	32	12~24VDC	Max. 1msec	Υ	12VDC	_		
PIO-16/16B(LPCI)H	16	16	12~24VDC	Max. 200µsec	Y	12VDC	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PIO-16/16B(PCI)H	16	16	12~24VDC	Max. 200µsec	Y	12VDC	Opto-Isolated (for high sink current output) (Negative logic)	4.7kΩ	
PIO-16/16B(PCI)	16	16	12~24VDC	Max. 1msec	Y	12VDC	Opto-Isolated (for current source output) (Negative logic)	3kΩ	
PIO-32/32B(PCI)H	32	32	12~24VDC	Max. 1msec	Υ	12VDC	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	1
PIO-16/16TB(PCI)	16	16	5VDC-TTL	Max. 1µsec	Υ	+5VDC	Opto-Isolated TTL	1.1kΩ	
Isolated High-voltage Non-polar									
PIO-16/16RY(PCI)	16	16	12~24VDC/ 24~48VDC	Input: Max. 200µsec Output:Max. 1.0µsec	Y	_	Opto-Isolated (for high sink current output / for current sourcing output)	3kΩ (12~24V) 6kΩ (24~48V)	
Reed Relay Output									
RRY-16C(PCI)	_	16	~125VAC/~30VDC	Max. 7msec	Υ	_	_	_	
RRY-32(PCI)	_	32	~100VAC/VDC	Max. 1msec	Y	_	_	_	
TTL-Level									
PIO-16/16T(LPCI)H	16	16	5VDC-TTL	Max. 200nsec	_	_	TTL level	10kΩ* ¹	
PIO-16/16T(PCI)	16	16	5VDC-TTL	Max. 200nsec	_	_	TTL level	10kΩ*1	
PIO-32/32T(PCI)	32	32	5VDC-TTL	Max. 200nsec	_	_	TTL level	10kΩ*1	
Bi-Directional									
PIO-48D(PCI)	4	-8	5VDC-TTL	Max. 200nsec	_		TTL level	10kΩ*1	
PIO-32DM(PCI)		2	5VDC-TTL	Max. 50nsec	_	_	TTL level	10kΩ*1	

●Compact PCI

Name	Char	nels	Signal Level	Response Time	Isolation	Internal	Input		
Name	Input	Output	Signal Level	nesponse rime	isolation	Power	Circuit	Resistance	
Opto-Isolated									
PI-64L(CPCI)	64	-	12~24VDC	Max. 1msec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	
PO-64L(CPCI)	_	64	12~24VDC	Max. 1msec	Υ	-	_	-	
PIO-32/32L(CPCI)	32	32	12~24VDC	Max. 1msec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	

●PC Card

J. J Jul. 4								
Name	Channels	Signal Level	Response Time	Isolation	Internal	Input		
Ivame	Input Output	Signal Level	nesponse rime	ISOIAHOH	Power	Input Circuit	Input Resistance	
Opto-Isolated								
PIO-16/16L(PM)	16 16	12~24VDC	Max. 1msec	Υ	_	Opto-Isolated (for high sink current output) (Negative logic)	3kΩ	
Bi-Directional TTL								
PIO-24W(PM)	24	5VDC-TTL	Max. 200nsec	_	_	TTL level	3kΩ	
TTL-Level								
PIO-32D(PM)	32	5VDC-TTI	Max 200nsec	_	_	TTI level	100kQ*1	

●USB

Name	Cha	nnels	Signal Level	Response Time	Isolation	Internal	Input		
Ivanie	Input	Output	Signal Level	nesponse fille	ISOIAHOH	Power	Circuit	Resistance	
Opto-Isolated									
DI-16(USB)GY	16	_	12~24VDC	1msec	Y	_	Opto-Isolated (for high sink current output / for current sourcing output)	3kΩ	
DO-16(USB)GY	_	16	12~24VDC	1msec	Y	-	-	-	
DIO-8/8(USB)GY	8	8	12~24VDC	1msec	Υ	_	Opto-Isolated (for high sink current output / for current sourcing output)	3kΩ	

●For ISA product line-up, please see pages B-22, 23

Industrial Automation Products

*1: Pull up resistors
*2: 16 channels share a positive common in external power supply.

Output		Common	Interrupt	Connector		ware	Page	Name
Туре	Rating	Common	- Interrupt	Connector	ACX-PAC(W32)	API-PAC(W32)	rage	Name
_	_	16	32 signals, 1 request	37-pin D-type	Υ	Included	B-05	PI-32L(PCI)H
-	_	16	4 signals, 1 request	37-pin D-type	Υ	Included	B-05	PI-32L(PCI)
-	-	16	32 signals, 1 request	96-pin Half Pitch	Y	Included	B-05	PI-64L(PCI)H
_	_	16	4 signals, 1 request	96-pin Half Pitch	Y	Included	B-05	PI-65L(PCI)
_	-	16	16 signals, 1 request	100-pin x2	Y	Included	B-06	PI-128L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	_	37-pin D-type	Υ	Included	B-07	PO-32L(PCI)H
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	_	37-pin D-type	Υ	Included	B-07	PO-32L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	_	96-pin Half Pitch	Y	Included	B-07	PO-64L(PCI)H
Opto-Isolated Open Collector (sinking type)	35VDC 150mA	16	_	96-pin Half Pitch	Υ	Included	B-07	PO-65L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	_	100-pin x2	Y	Included	B-08	PO-128L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	50-pin Heade	Y	Included	B-09	PIO-16/16L(PCI)H
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	37-pin D-type	Υ	Included	B-09	PIO-16/16L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	4 signals, 1 request	37-pin D-type	Y	Included	B-09	PIO-16/16L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	32 signals, 1 request	96-pin Half Pitch	Y	Included	B-09	PIO-32/32L(PCI)H
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	4 signals, 1 request	96-pin Half Pitch	Υ	Included	B-09	PIO-32/32L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	100-pin x2	Y	Included	B-10	PIO-64/64L(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 50mA	16	4 signals, 1 request	96-pin Half Pitch	Υ	Included	B-10	PIO-32/32F(PCI)
3,17								
_	_	16	32 signals, 1 request	37-pin D-type	Y	Included	B-06	PI-32B(PCI)
_	_	All channels share one common *2	4 signals, 1 request	37-pin D-type	Ý	Included	B-06	PI-32B(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	- I orginale, i roqueet	37-pin D-type	Ý	Included	B-08	PO-32B(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	All channels share one common *2	_	37-pin D-type	Ý	Included	B-08	PO-32B(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	50-pin Heade	Ý	Included	B-10	PIO-16/16B(LPCI)H
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	37-pin D-type	Y	Included	B-10	PIO-16/16B(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	All channels share one common *2	4 signals, 1 request	37-pin D-type	Y	Included	B-10	PIO-16/16B(PCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	All channels share one common *2	4 signals, 1 request	96-pin Half Pitch	Ý	Included	B-10	PIO-32/32B(PCI)H
Opto-Isolated TTL	5VDC 6.4mA	All channels share one common *2	4 signals, 1 request	37-pin D-type	Ý	Included	B-11	PIO-16/16TB(PCI)
opto lociated 112	0120 0111111	The original	Torgitale, Troqueet	Or pair B type		moradod	5	110 10/10/15(1 01)
0 : 1 : 5 :	100//10///00 157	40	10 1 1 1	07 : 04			D 44	DIO 40/40D\//DO::
Semiconductor Relay	120VAC/VDC 100mA	16	16 signals, 1 request	37-pin D-type	Y	Included	B-11	PIO-16/16RY(PCI)
Reed Relay	125VAC/30VDC 2mA	All channels independent	_	37-pin D-type	Y	Included	B-11	RRY-16C(PCI)
Reed Relay	100VAC/VDC 0.5mA	8	_	37-pin D-type	Y	Included	B-11	RRY-32(PCI)
								` '
Open Collector	30VDC 40mA	16	16 signals, 1 request	50-pin Heade	Υ	Included	B-12	PIO-16/16T(LPCI)H
Open Collector	30VDC 40mA	All channels share one common *2	4 signals, 1 request	37-pin D-type	Ý	Included	B-12	PIO-16/16T(PCI)
Open Collector	30VDC 40mA	All channels share one common *2	4 signals, 1 request	96-pin Half Pitch	Ý	Included	B-12	PIO-32/32T(PCI)
- p			g,q					
TTL level	5VDC 24mA	All channels share one common *2	48 signals, 1 request	96-pin Half Pitch	Υ	Included	B-12	PIO-48D(PCI)
TTL level	5VDC 24mA	All channels share one common *2	Errors & various factors, 1 request	96-pin Half Pitch	<u> </u>	Included	B-13	PIO-32DM(PCI)
11210401	OVEC LAND	s	2.75.5 & various lastors, 1 request	1 00 pin main mon		ioidaca	D 10	OLDIVILI OI)

Output Rating		Common	Interrupt	Connector	Softv ACX-PAC(W32)		Page	Name
туре	rialing				HON-1 HO(VIOZ)	AI 1-1 AO(W02)		
_	-	16	4 signals, 1 request	96-pin Half Pitch	Y	Included	B-14	PI-64L(CPCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	_	96-pin Half Pitch	Y	Included	B-14	PO-64L(CPCI)
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	4 signals, 1 request	96-pin Half Pitch	Υ	Included	B-14	PIO-32/32L(CPCI)

Output Type Rating		Common	Interrupt	Connector	Softv ACX-PAC(W32)		Page	Name
- 798-2					,			
Opto-Isolated Open Collector (sinking type)	35VDC 100mA	16	16 signals, 1 request	37-pin D-type	Υ	Included	B-15	PIO-16/16L(PM)
TTL level	5VDC 1mA	All channels share one common *2	2 signals, 1 request	37-pin D-type	Y	Included	B-15	PIO-24W(PM)
TTL level	5VDC 1cL6mA, 1oH=-2mA	All channels share one common *2	32 signals, 1 request	37-pin D-type	Υ	Included	B-15	PIO-32D(PM)

Output		Common	Interrupt	Connector	Softv	ware	Page	Name
Туре	Rating	Rating Common Interrupt Connector		Connector	ACX-PAC(W32)	API-PAC(W32)	Page	ivame
_	_	8	_	x2 9-pin Screwless Connectors	Y	Included	B-16	DI-16(USB)GY
Opto-Isolated Open Collector (sinking type)	24VDC 150mA	8	_	x2 10-pin Screwless Connectors	Y	Included	B-16	DO-16(USB)GY
Onto-Isolated Onen Collector (sinking type)	24VDC 150m4	8	_	v2 11-nin Scrawless Connectors		Included	B-16	DIO-8/8/LISBIGV

B-03

Product Lineup / Basic Knowledge

PCI

Compact PCI

PC Card

USB

Product Lineup (ISA)