Termination Panel with BNC connectors for Analog I/O Boards

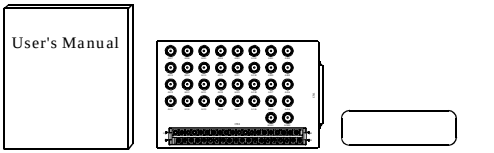
ATP-32F User's Manual

CONTEC CO.,LTD.

Thank you for purchasing the CONTEC product.
The product consists of the items listed below. Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

Product Configuration List

- ATP-32F Termination Panel…1
- This User's Manual…1
- Signal name label sheet…1



⚠ CAUTION

- Use it in a regulated system requirements (temperature and humidity).
- Do not use or store the product in a location exposed to extremely high or low temperature or susceptible to rapid temperature changes.

  Example: - Exposure to direct sun
  - In the vicinity of a heat source
- Clean the ATP-32F by wiping lightly with a soft cloth moistened with water or a cleaning solution. Take care to avoid the use of benzene, thinners or other volatile solutions which may cause deformation or discoloration.
- CONTEC will bear no responsibility for any problems, etc., resulting from modifying this product.
- When carrying the product, be careful not to apply direct vibration or shock to the board.

Notes

- The information in this document is subject to change without notice.
- All relevant issues have been considered in the preparation of this document. Should you notice an omission or any questionable item in this document, please feel free to notify CONTEC CO., LTD.
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1. About the Termination Panel

ATP-32F are the termination panel with BNC connectors for CONTEC's analog I/O board AIO-163202F-PE, ADA16-32/2(PCI)F, AD16-64(LPCI)LA and PC card ADA16-32/2(CB)F.
This terminal box eases your connection of external devices and signals.

1.1. Features

Compact designing

With its compact designing, you can place this BNC connector terminal box at your Personal computer. By removing the connection cable, you can carry this box with your easily.

Lightly designing by Aluminum

It is lightly designed by using an aluminum in consideration of portable.

Easy to connect external signals

Allow you to connect analog signal through a BNC cable. All other digital signals are connected through M3 screw terminals.

Signal name label sheet

A name label sheet of digital signals of AD board or cards is bundled.
Sticking this name label helps you to link the external digital signals to our board or PC-Card products.

2. Connect an Board

2.1. Terminal Pin and the Corresponding Board / PC-Card Connector Pin Assignment

Table 1 Terminal Pin and the Related Board / PC-Card Connector Pin Assignment

Signal name on ATP-32F	Description	Signal name on Supported Item
BNC connectors		
AI00 - AI31	Analog inputs signal.	Analog Input00 - Analog Input31
AO00 - AO01	Analog outputs signal.	Analog Output00 - Analog Output01
Screw terminals		
AISTART	Trigger input signal that starts one of analog to digital conversion sampling transactions.	AI External Start Trigger Input
AISTOP	Trigger input signal that stops an on going analog to digital conversion sampling transaction.	AI External Stop Trigger Input
AIEXCLK	Clock input signal for analog to digital conversion transactions.	AI External Sampling Clock Input
AIOUT0	External sampling clock output signal for analog input.	AI Control Signal Output00
AIOUT1	External output signal for analog states.	AI Control Signal Output01
AOSTART	Trigger input signal that starts one of digital to analog conversion sampling transactions.	AO External Start Trigger Input
AOSTOP	Trigger input signal that stops an on going digital to analog conversion sampling transaction.	AO External Stop Trigger Input
AOEXCLK	Clock input signal for digital to analog conversion transactions.	AO External Sampling Clock Input
AOOUT0	External sampling clock output signal for analog output.	AO Control Signal Output00
AOOUT1	External output signal for analog output states.	AO Control Signal Output01
DI00 - DI07	Digital input signals.	Digital Input00 - Digital Input07
DO00 - DO07	Digital output signals.	Digital Output00 - Digital Output07
CNTGATE0 - CNTGATE1	Counter gate control input signal.	Counter Gate Control Input00 - Counter Gate Control Input01
CNTUPCLK0 - CNTUPCLK 1	Pulse input signal for Up counting transaction.	Counter Up Clock Input00 - Counter Up Clock Input01
CNTOUT0 - CNTOUT1	Counter output signal.	Counter Output00 - Counter Output01
DGND	Ground for all the digital signals.	Digital Ground
Reserved	Reserved.	Reserved

- For an AIO-163202F-LPE, ADA16-32/2(PCI)F board
  32ch of analog input signals, 2ch of analog output signals, 8ch of digital Input signals, 8ch of digital Output signals, 2ch of counter I/O signals, control input signals for analogue I/O signals, control output signals for analogue I/O signals can be connected through ATP-32F terminal box.

- For an AD16-64(LPCI)LA board
  64ch *1 of analog input signals, 4ch of digital Input signals, 4ch of digital Output signals, 1ch counter I/O signal, control input signals for analogue input signals can be connected through ATP-32F terminal box.

  *1: One ATP-32F can be used up to 32ch. If you use 32ch or more channels, two ATP-32F are needed.

2.2. Pin Assignment of Connector

CN1

	[49]	[1]	
N.C.	B48	A48	Analog Output 00
N.C.	B47	A47	Analog Ground (for AO)
N.C.	B46	A46	Analog Output 01
N.C.	B45	A45	Analog Ground (for AO)
Analog Input 08	B44	A44	Analog Input 00
Analog Input 24	B43	A43	Analog Input 16
Analog Input 09	B42	A42	Analog Input 01
Analog Input 25	B41	A41	Analog Input 17
N.C.	B40	A40	N.C.
N.C.	B39	A39	N.C.
Analog Input 10	B38	A38	Analog Input 02
Analog Input 26	B37	A37	Analog Input 18
Analog Input 11	B36	A36	Analog Input 03
Analog Input 27	B35	A35	Analog Input 19
Analog Ground (for AI)	B34	A34	Analog Ground (for AI)
Analog Ground (for AI)	B33	A33	Analog Ground (for AI)
Analog Input 12	B32	A32	Analog Input 04
Analog Input 28	B31	A31	Analog Input 20
Analog Input 13	B30	A30	Analog Input 05
Analog Input 29	B29	A29	Analog Input 21
N.C.	B28	A28	N.C.
N.C.	B27	A27	N.C.
Analog Input 14	B26	A26	Analog Input 06
Analog Input 30	B25	A25	Analog Input 22
Analog Input 15	B24	A24	Analog Input 07
Analog Input 31	B23	A23	Analog Input 23
Analog Ground (for AI)	B22	A22	Analog Ground (for AI)
Analog Ground (for AI)	B21	A21	Analog Ground (for AI)
N.C.	B20	A20	N.C.
N.C.	B19	A19	N.C.
Digital Output 00	B18	A18	Digital Input 00
Digital Output 01	B17	A17	Digital Input 01
Digital Output 02	B16	A16	Digital Input 02
Digital Output 03	B15	A15	Digital Input 03
Digital Output 04	B14	A14	Digital Input 04
Digital Output 05	B13	A13	Digital Input 05
Digital Output 06	B12	A12	Digital Input 06
Digital Output 07	B11	A11	Digital Input 07
AO Control Signal Output 00	B10	A10	AI Control Signal Output 00
AO Control Signal Output 01	B09	A09	AI Control Signal Output 01
Digital Ground	B08	A08	Digital Ground
AO External Sampling Clock Input	B07	A07	AI External Sampling Clock Input
AO External Stop Trigger Input	B06	A06	AI External Stop Trigger Input
AO External Start Trigger Input	B05	A05	AI External Start Trigger Input
Counter UP Clock Input 01	B04	A04	Counter UP Clock Input 00
Reserved	B03	A03	Reserved
Counter Gate Control Input 01	B02	A02	Counter Gate Control Input 00
Control Output 01	B01	A01	Counter Output 00
	[96]	[48]	

- The numbers in square brackets [ ] are pin numbers designated by HONDA TSUSHIN KOGYO CO., LTD.

Figure 1 Pin Assignment of Connector CN1

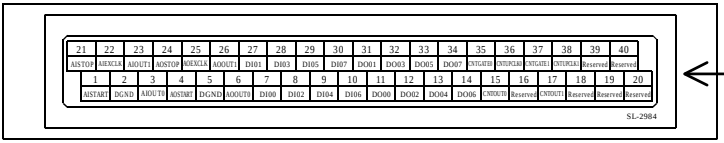
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
AI STOP	AI EXCLK	AI OUT1	AO STOP	AO EXCLK	AO OUT1	DI01	DI03	DI05	DI07	DO01	DO03	DO05	DO07	CNT GATE0	CNT UPCLK0	CNT GATE1	CNT UPCLK1	Reserved	Reserved

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
AI START	DGND	AI OUT0	AO START	DGND	AO OUT0	DI00	DI02	DI04	DI06	DO00	DO02	DO04	DO06	CNT OUT0	Reserved	CNT OUT1	Reserved	Reserved	Reserved

Figure 2 Pin Assignment of Digital Input and Output Signals (CN2)

2.3. Example of Using Signal Name Label Sheet

A name label sheet for M3 screw terminals is bundled with this ATP-32F terminal box.
You can stick one of these labels either on top of the screw terminals' cover or at front side of ATP-32F box by your preference, corresponding to your AD product.



Name Label Sheet

Stick one of these labels either on top of the screw terminals' cover or at front side of ATP-32F box.

2.4. Application with Board / PC-Card

2.4.1. Connect an AIO-163202F-PE, ADA16-32/2(PCI)F Board

You need a CONTEC PCB96PS series option cable or a CONTEC PCB96P series option cable to connect the board to the CN1 connector of ATP-32F terminal box.

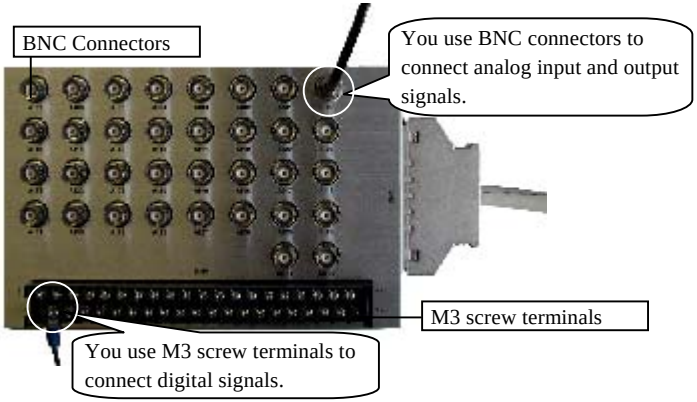
⚠ CAUTION

We suggest you to use a PCB96PS-0.5m option cable to connect the board and terminal box.

2.4.2. Connect an AD16-64(LPCI)LA Board and ADA16-32/2(CB)F PC-Card

For the AD16-64(LPCI)LA, ADA16-32/2(CB)F, Connect the CONTEC optional cable (ADC-68M/96F) to the CN1.

2.5. Connect External Signals



3. Connection Drawing

Supported Item	ATP-32F
Analog Input 00 - 31	AI00 - 31
Analog Output 00 - 01	AO00 - 01
Digital Input 00 - 07	DI00 - 07
Digital Output 00 - 07	DO00 - 07
Analog Ground	Analog Ground
AI External Start Trigger Input	AISTART
AI External Stop Trigger Input	AISTOP
AI External Sampling Clock Input	AIEXCLK
AI Control Signal Output00	AIOUT0
AI Control Signal Output01	AIOUT1
AO External Start Trigger Input	AOSTART
AO External Stop Trigger Input	AOSTOP
AO External Sampling Clock Input	AOEXCLK
AO Control Signal Output00	AOOUT0
AO Control Signal Output01	AOOUT1
Counter Gate Control Input00	CNTGATE0
Counter Up Clock Input00	CNTUPCLK0
Counter Output00	CNTOUT0
Counter Gate Control Input01	CNTGATE1
Counter Up Clock Input01	CNTUPCLK1
Counter Output01	CNTOUT1
Digital Ground	DGND
Reserved	Reserved

Figure 3 Connection Drawing

4. Dimensions

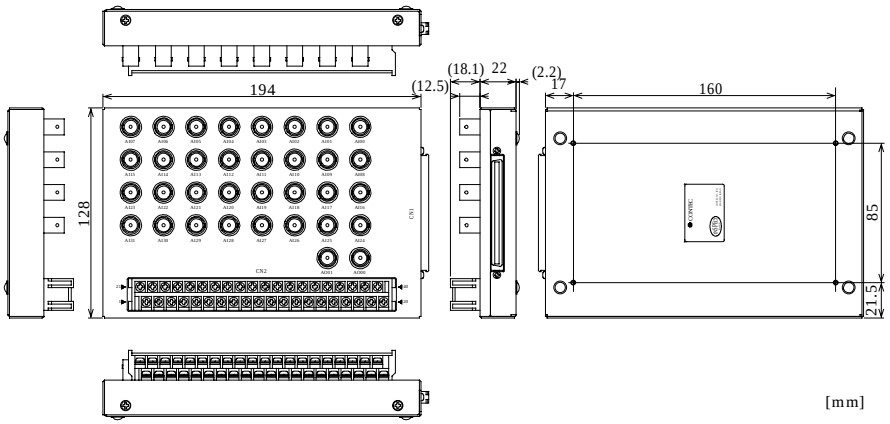


Figure 4 Dimensions

5. Specifications

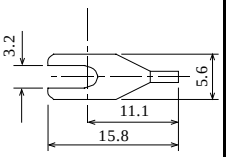
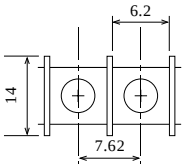
Table 2 Specifications of ATP-32F

Items	Specification
Supported Products	AIO-163202F-PE, ADA16-32/2(PCI)F, AD16-64(LPCI)LA, ADA16-32/2(CB)F
Analog Input	32ch (BNC connector, AI00 - AI31)
Analog Output	2ch (BNC connector, AO00 - AO01)
Control input of analog I/O	6ch (Screw terminals, AISTART, AISTOP, AIEXTCLK, AOSTART, AOSTOP, AOEXTCLK)
Control output of analog I/O	4ch (Screw terminals, AIOUT0 - AIOUT1, AOOUT0 - AOOUT1)
Digital Input	8channels (Screw terminals, DI00 - DI07)
Digital Output	8channels (Screw terminals, DO00 - DO07)
Counter I/O	2ch (Screw terminals, CNTUP,CNTCLK,CNTOUT)
Operating Conditions	0 - 50ºC, 10 - 90%RH (no condensation)
Dimensions (mm)	194(W) x 40.1(D) x 128(H) (Not include the height of screw terminal block and rubber feet)
Weight	530g

Table 3 Specification of Interface Connector CN1

Type of Connector	PCR-E96LMD [mfd. by HONDA] or equivalent
Type of mating connector	PCS-E96FA [mfd. by HONDA] or equivaletn
Connecting Cable	AIO-163202F-PE, ADA16-32/2(PCI)F : PCB96-**PS : PCB96-**P(Option) AD16-64(LPCI)LA, ADA16-32/2(CB)F : ADC-68M/96F (Option)

Table 4 Specification of Terminal Block

Terminal	OBU-553-40P mfd by Osada	Suitable Y-type terminal	C3A mfd by JST Mfg. Co., Ltd.
Screw type	M3	Dimension of Y-type terminal [mm]	
Dimensions of Terminal [mm]			

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