

Termination Panel with Differential Receivers for Counter Input  
**CTP-4D**



\* Specifications, color and design of the products are subject to change without notice.

**Features**

- Differential input enabled with the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB).
- Capable of differential input by connection to the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB).
- Designed to be compact to stay out of the way on the desktop  
 Small terminal box available by the side a notebook PC. Highly portable as the cable is connector-removable.
- Lightweight design based on the aluminum housing  
 Lightweight aluminum housing contributing to portability
- Easy to replace the PCI bus board CNT32-8M(PCI)  
 Connecting the CTP-4D to the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB) provides the equivalent interface to the CNT32-8M(PCI).  
 Using a half-pitch 96-pin connector designed with pin compatibility (\*1)  
 \*1: Not completely compatible
- Built-in power LED  
 The built-in power LED tells whether the CTP-4D is powered.

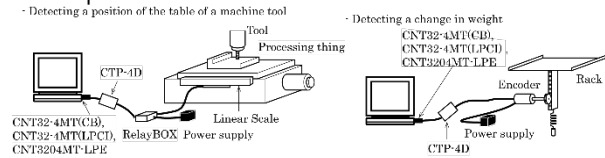
**Packing List**

- Terminal [CTP-4D] ...1
- User's Guide ...1
- Warranty Certificate ...1
- Serial Number Label...1

This product is a differential input conversion terminal for the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB) a 32-bit high-speed up/down counter card manufactured by CONTEC.

This product enables differential input by being connected between the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB) and a differential input device. (The CTP-4D requires a CNT-68M/50M optional cable for connection with the CNT3204MT-LPE, CNT32-4MT(LPCI), CNT32-4MT(CB).)

< Example >



- \* The contents in this document are subject to change without notice.
- \* Visit the CONTEC website to check the latest details in the document.
- \* The information in the data sheets is as of July 2022.

**Specifications**

Item	Specification
<b>Input</b>	
Counter	
Channel count	4 channels
Count system	Up/down counting (2-phase/Single-phase/Single-phase Input with Gate Control Attached)
Max. count	FFFFFFFF(binary data, 32Bit)
Input type	Differential input
Counter input signal	Phase-A/UP 1 x 4 channels, Phase-B/DOWN 1 x 4 channels Phase-Z/CLR 1 x 4 channels
Differential input part	Device used: AM26C32 (T.I) or equivalent to it Register: 150Ω (Separable with SW) Receiver input sensitivity: ±200mV In-phase input voltage range: ±7V Allowable distance of signal extension: 1200m (Depending on wiring environment and input frequency) *1*2
Response frequency	10MHz 50% duty
Sampling*3	
Sampling input signal type	Unisolated TTL level input
Sampling input channel	Start / dock / stop 1 point each
Response time	100nsec (Max.)
Control*3	
Control input signal type	Unisolated TTL level input
Control input Channel	1 x 4 channels
Response time	100nsec (Max.)
<b>Output*3</b>	
Control	
Control output signal type	Unisolated open-collector output or TTL level output (selectable by SW1)
Control output channel	1 x 4 channels
Control output signal	- Count match 0 output(one-shot pulse output) - Count match 1 output(one-shot pulse output) - Digital filter error output(one-shot pulse output) - Abnormal input error output(one-shot pulse output) - General-purpose output(Level output) Software-selected from among the above five options (Positive/negative logic is selected with the software.)
One shot output signal amplitude	Selected between 10μsec, 100μsec, 1msec, 10msec and 100 msec (Can be set for each channel, within precision + 1μsec)
Response time	50sec (Max.)
Rated output current	30V 40mA
Test pulse	
Test pulse output signal type	Differential output
Test pulse output channel	One for each of phases-A and B
Output frequency	100kHz fixed
Sampling	
Sampling output signal type	Unisolated TTL level output
Sampling output channel	Start / dock / stop 1 point each
One-shot output signal width	Negative logic 100nsec (fixed)
<b>Common</b>	
Power consumption	3.3VDC Terminal register (When OFF: 300mA (Max.) / Terminal register (When ON: 500mA(Max))
Operating condition	0 - 50°C, 10 - 90%RH (No condensation)
External dimension (mm)	120.0(W) x 88.0(D) x 22.0(H) (No protrusion)

Weight	160g
Standard	VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

- \*1 The frequency responsive at an extension of 50 m is about 10 MHz (depending on the wiring environment).  
The frequency responsive at an extension of 100 m is about 5 MHz (depending on the wiring environment).  
The frequency responsive at an extension of 150 m is about 1.5 MHz (depending on the wiring environment).  
The frequency responsive at an extension of 300 m is about 1 MHz (depending on the wiring environment).  
The frequency responsive at an extension of 600 m is about 500 KHz (depending on the wiring environment).  
The frequency responsive at an extension of 1200 m is about 80 KHz (depending on the wiring environment).
- \*2 Please use the shielded cable with a length of less than 30m to meet "CE EMC Directive".
- \*3 Please use the shielded cable to meet "CE EMC Directive".

## Cable & Connector

### Cable (Option)

Shielded cable for CardBus counter input card :  
CNT-68M/50M (0.5m) (necessity)

Shielded cable with double-ended connector for 96-pin half-pitch connector (Molded type) :  
PCB96PS-0.5P (0.5m), PCB96PS-1.5P (1.5m)

Flat cable with double-ended connector for 96-pin half-pitch connector :  
PCB96P-1.5 (1.5m)

Shielded cable with single-ended connector for 96-pin half-pitch connector (Molded type):  
PCA96PS-0.5P (0.5m), PCA96PS-1.5P (1.5m)

Flat cable with single-ended connector for 96-pin half-pitch connector :  
PCA96P-1.5 (1.5m)

\* Information about the option products, see the Contec's website.

## List of Option

### Accessories (Option)

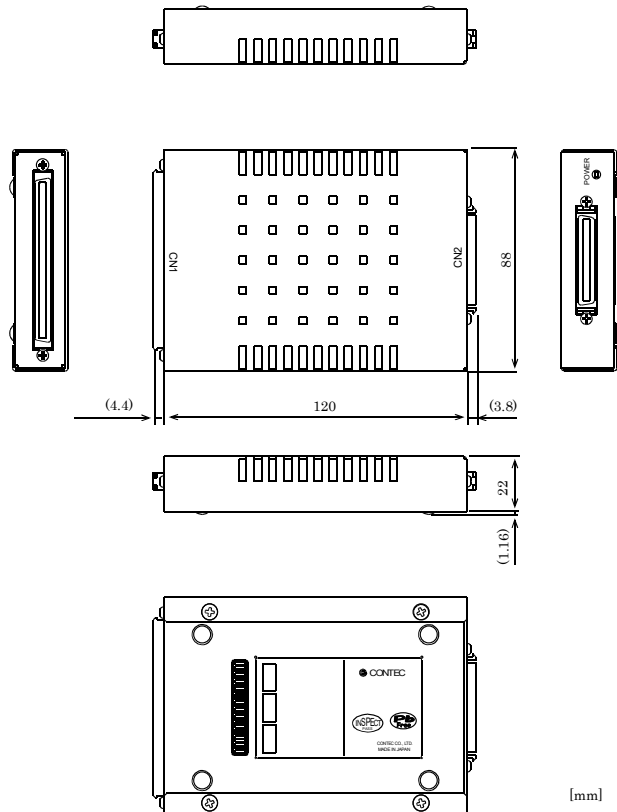
Screw Terminal Unit (M3 x 96P) : EPD-96A \*1 \*2

Screw Terminal Unit (M3.5 x 96P) : EPD-96 \*1

Terminal Unit for Cables (M3 x 96P) : DTP-64A \*1

- \*1 PCB96P or PCB96PS optional cable is required separately.
- \*2 "Spring-up" type terminal is used to prevent terminal screws from falling off.
- \* Check the CONTEC's Web site for more information on these options.

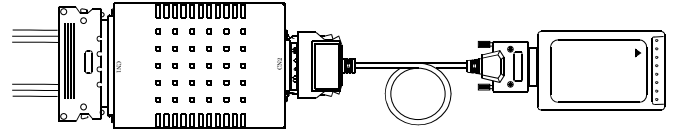
## External Dimensions



## Using the On-Terminal Connectors

### Connecting a Terminal to a Connector

Use the on-terminal interface connector (CN1) to connect the terminal to an external device.



### Connector Pin Assignment

Use the connector mounting the terminal to connect it to an external device.

Ground	GND	.... B48	A48	.... GND	Ground
Ground	GND	.... B47	A47	.... GND	Ground
Not connected	N.C.	.... B46	A46	.... D3Z-	CH3 differential phase-Z input-
Not connected	N.C.	.... B45	A45	.... D3Z+	CH3 differential phase-Z input+
Not connected	N.C.	.... B44	A44	.... D3B-	CH3 differential phase-B input-
Not connected	N.C.	.... B43	A43	.... D3B+	CH3 differential phase-B input+
Not connected	N.C.	.... B42	A42	.... D3A-	CH3 differential phase-A input-
Not connected	N.C.	.... B41	A41	.... D3A+	CH3 differential phase-A input+
Ground	GND	.... B40	A40	.... GND	Ground
Ground	GND	.... B39	A39	.... GND	Ground
Not connected	N.C.	.... B38	A38	.... D2Z-	CH2 differential phase-Z input-
Not connected	N.C.	.... B37	A37	.... D2Z+	CH2 differential phase-Z input+
Not connected	N.C.	.... B36	A36	.... D2B-	CH2 differential phase-B input-
Not connected	N.C.	.... B35	A35	.... D2B+	CH2 differential phase-B input+
Not connected	N.C.	.... B34	A34	.... D2A-	CH2 differential phase-A input-
Not connected	N.C.	.... B33	A33	.... D2A+	CH2 differential phase-A input+
Ground	GND	.... B32	A32	.... GND	Ground
Ground	GND	.... B31	A31	.... GND	Ground
Not connected	N.C.	.... B30	A30	.... D1Z-	CH1 differential phase-Z input-
Not connected	N.C.	.... B29	A29	.... D1Z+	CH1 differential phase-Z input+
Not connected	N.C.	.... B28	A28	.... D1B-	CH1 differential phase-B input-
Not connected	N.C.	.... B27	A27	.... D1B+	CH1 differential phase-B input+
Not connected	N.C.	.... B26	A26	.... D1A-	CH1 differential phase-A input-
Not connected	N.C.	.... B25	A25	.... D1A+	CH1 differential phase-A input+
Ground	GND	.... B24	A24	.... GND	Ground
Ground	GND	.... B23	A23	.... GND	Ground
Not connected	N.C.	.... B22	A22	.... DOZ-	CH0 differential phase-Z input-
Not connected	N.C.	.... B21	A21	.... DOZ+	CH0 differential phase-Z input+
Not connected	N.C.	.... B20	A20	.... DOB-	CH0 differential phase-B input-
Not connected	N.C.	.... B19	A19	.... DOB+	CH0 differential phase-B input+
Not connected	N.C.	.... B18	A18	.... DOA-	CH0 differential phase-A input-
Not connected	N.C.	.... B17	A17	.... DOA+	CH0 differential phase-A input+
Ground	GND	.... B16	A16	.... GND	Ground
Ground	GND	.... B15	A15	.... GND	Ground
Not connected	N.C.	.... B14	A14	.... D13	CH3 control input *1
Not connected	N.C.	.... B13	A13	.... D12	CH2 control input *1
Not connected	N.C.	.... B12	A12	.... D11	CH1 control input *1
Not connected	N.C.	.... B11	A11	.... D10	CH0 control input *1
External sampling start signal input	EXTSTARTP	.... B10	A10	.... EXTCLK	External sampling clock input
External sampling stop signal input	EXTSTOP	.... B09	A09	.... GND	Ground
Ground	GND	.... B08	A08	.... GND	Ground
Not connected	N.C.	.... B07	A07	.... DO3	CH3 control output *2
Sampling start trigger signal output	STARTOUT	.... B06	A06	.... DO2	CH2 control output *2
Sampling stop trigger signal output	STOPOUT	.... B05	A05	.... DO1	CH1 control output *2
Sampling clock trigger signal output	CLKOUT	.... B04	A04	.... DO0	CH0 control output *2
Ground	GND	.... B03	A03	.... GND	Ground
Test pulse differential phase-A output-	TPOA-	.... B02	A02	.... TPOB-	Test pulse differential phase-B output-
Test pulse differential phase-A output+	TPOA+	.... B01	A01	.... TPOB+	Test pulse differential phase-B output+

[ ] shows the pin No. specified by the HONDA TSUSHIN KOGYO., CO.LTD.  
\*1 The control input can serve as the general-input, counter start/stop, preset, and zero-clear.  
\*2 The control output can serve as the general-output, count match, abnormal input error and digital filter error.