

Line Seiki Co., Ltd.

Pulse Generator for Length Measurement CT1 Series

A Collection of Wiring Samples

NOTE 1:

When you use a CT1 unit with an electronic counter made by other manufacturer than Line Seiki and/or with PLC, we kindly ask you for your perusal of wiring methods described on their instruction manuals. There is a possibility that they recommend a wiring method that is different from what is described on this document.

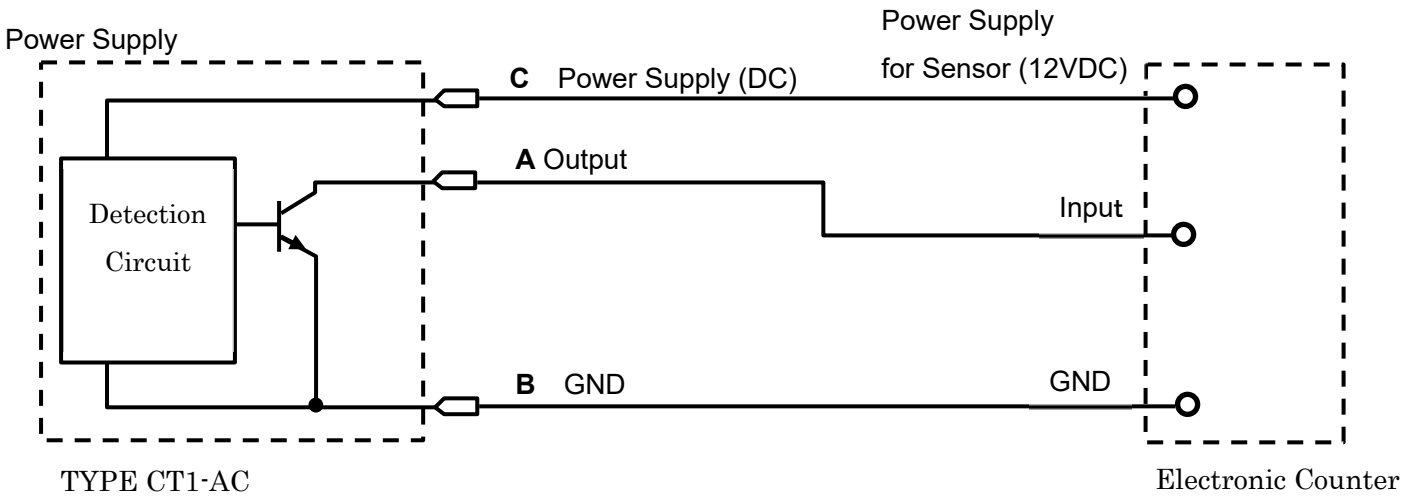
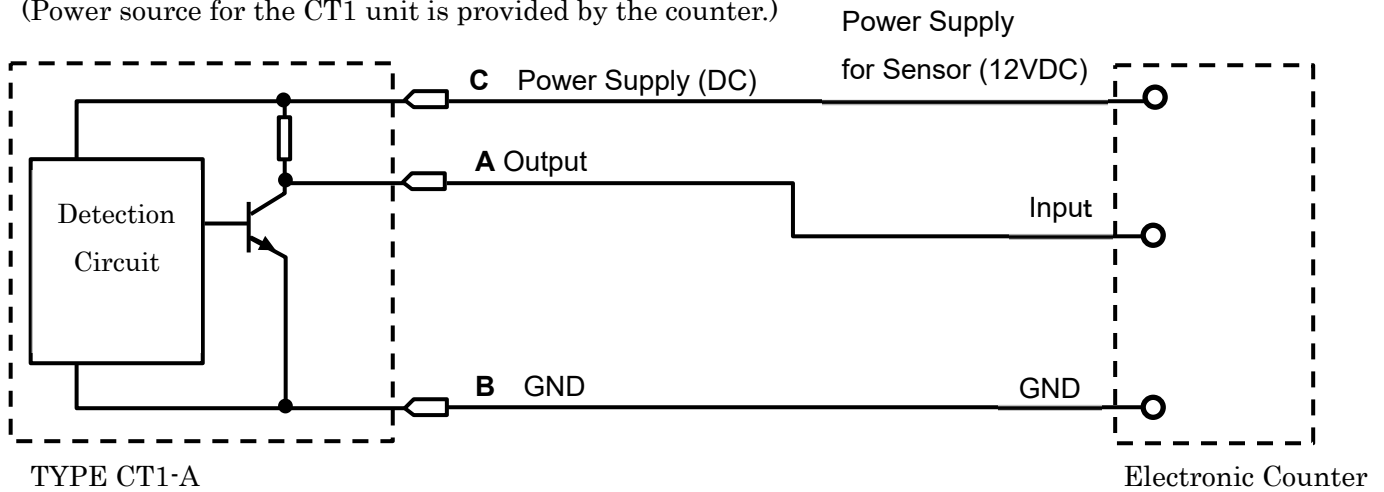
NOTE 2:

Any breakdown and/or damage caused by miswiring is out of warranty.

Last revised on 26-August-2021

1. Wiring Diagram: Connect CT1-A/ CT1-AC to an electronic counter

(Power source for the CT1 unit is provided by the counter.)



Wiring 3P Connector of CT1-A/CT1-AC to Electronic Counter

Connector		Corresponding Terminal Number of Electronic Counter						
		MD	G48 (*1)	E48 (*1)	E60	E10	E21	G90 · G95 (*2)
A	Output	4	1	1	1	1	15	2
B	GND	3	4	4	4	4	17	1
C	DC Power Source	2	3	3	3	3	21	4

*1 The following models are not able to provide power source (DC power) to any CT1 unit.

Please provide the CT1 unit with external power source.

G48-306, G48-306C, E48-102, E48-112

*2 If the following conditions are applicable, please select open-collector input by connecting terminals #10 & 11 of G90/G95 counter.

- CT1-A unit connects to G90/G95 counter.

- Power source for CT1-A unit is provided by G90/G95 counter.

NOTE: CT1-ACH unit requires 24VDC as its power source, therefore, it is not possible to utilize power source of an electronic counter.

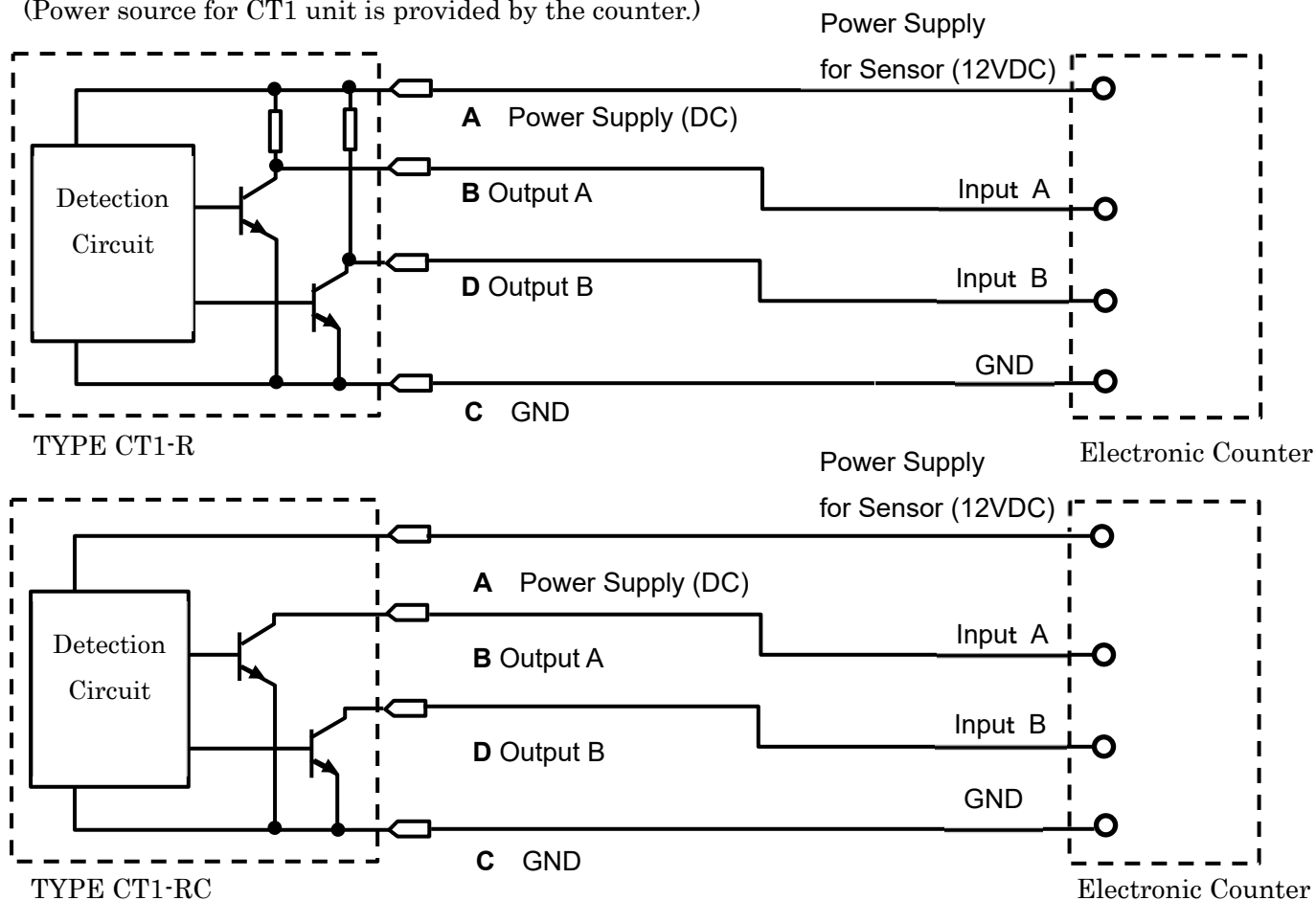
Please provide external power source to CT1-ACH.

NOTE: It is possible to connect CT1-A unit to an electronic counter and make open-collector input.

Please supply power source of 12VDC to CT1-A unit from the electronic counter.

2. Wiring Diagram: Connect CT1-R / CT1-RC to an electronic counter

(Power source for CT1 unit is provided by the counter.)



Wiring 4P Connector of CT1-R/CT1-RC to Electronic Counter

Connector		Corresponding Terminal Number of Electronic Counter						
		MDR	G48 (*1)	E48 (*1)	E60	E10	E21	G90 · G95(*2)
A	DC Power Source	3	3	3	3	3	21	4
B	Output A	4	1	1	1	1	15	2
C	GND	6	4	4	4	4	17	1
D	Output B	5	2	2	2	2	16	3

*1 The following models are not able to provide power source (DC power) to any CT1 unit.

Please provide the CT1 unit with external power source.

G48-306, G48-306C, E48-102, E48-112

*2 If the following conditions are applicable, please select open-collector input by connecting terminals #10 & 11 of G90/G95 counter.

- CT1-R unit connects to G90/G95 counter.

- Power source for CT1-R unit is provided by G90/G95 counter.

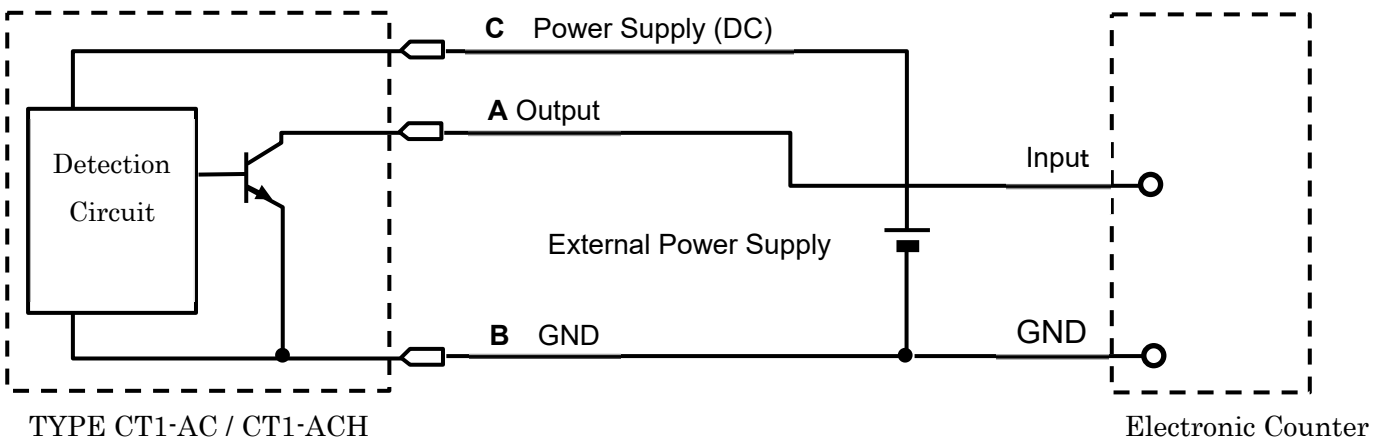
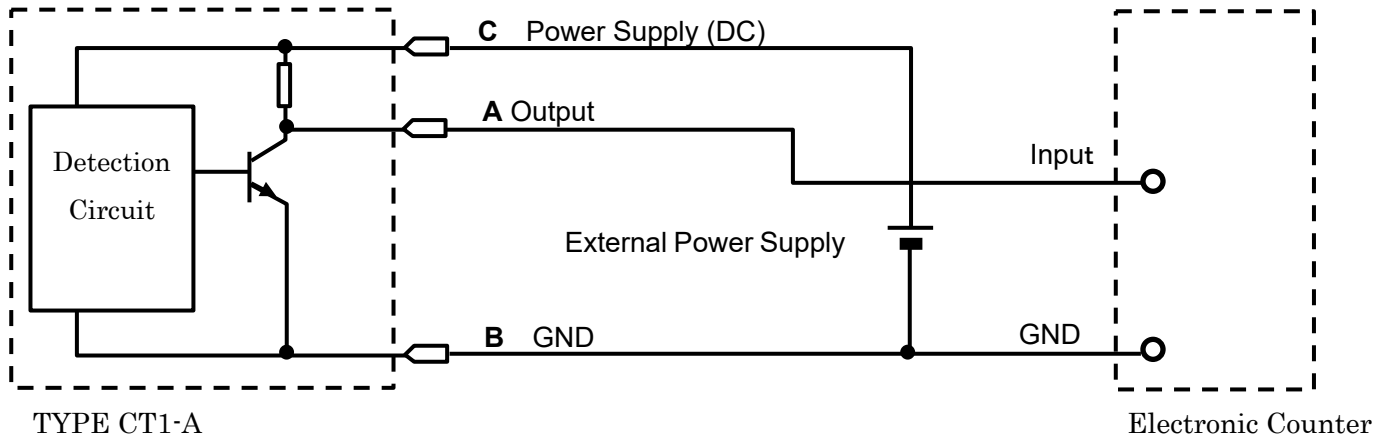
NOTE: CT1-RCH unit requires 24VDC as its power source, therefore, it is not possible to utilize power source of an electronic counter.

Please provide external power source to CT1-RCH.

NOTE: It is possible to connect CT1-R unit to an electronic counter and make open-collector input.

Please supply power source of 12VDC to CT1-R unit from the electronic counter.

3. Wiring Diagram: Connect CT1-A/ CT1-AC / CT1-ACH to an electronic counter, providing external power



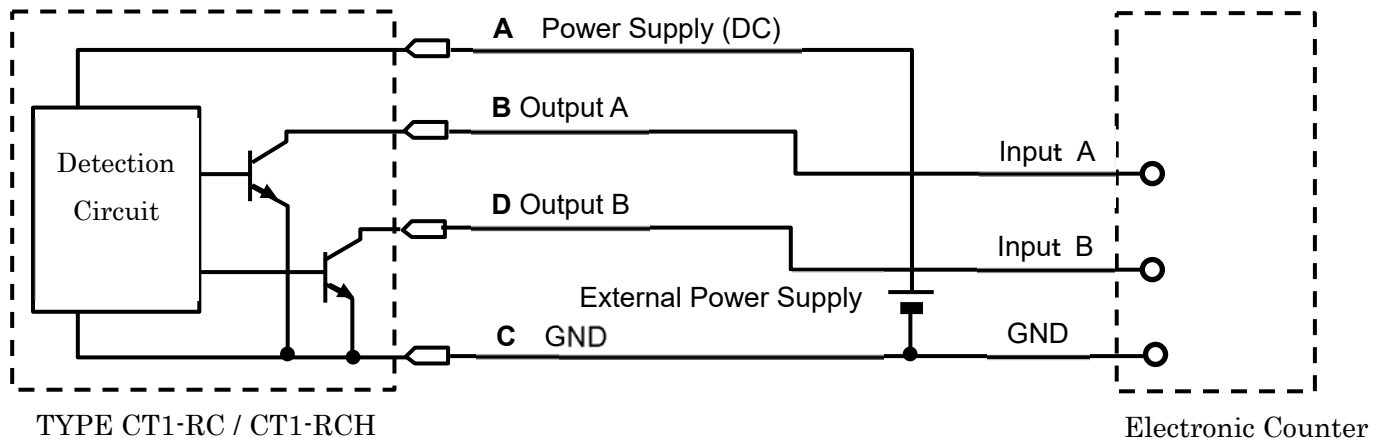
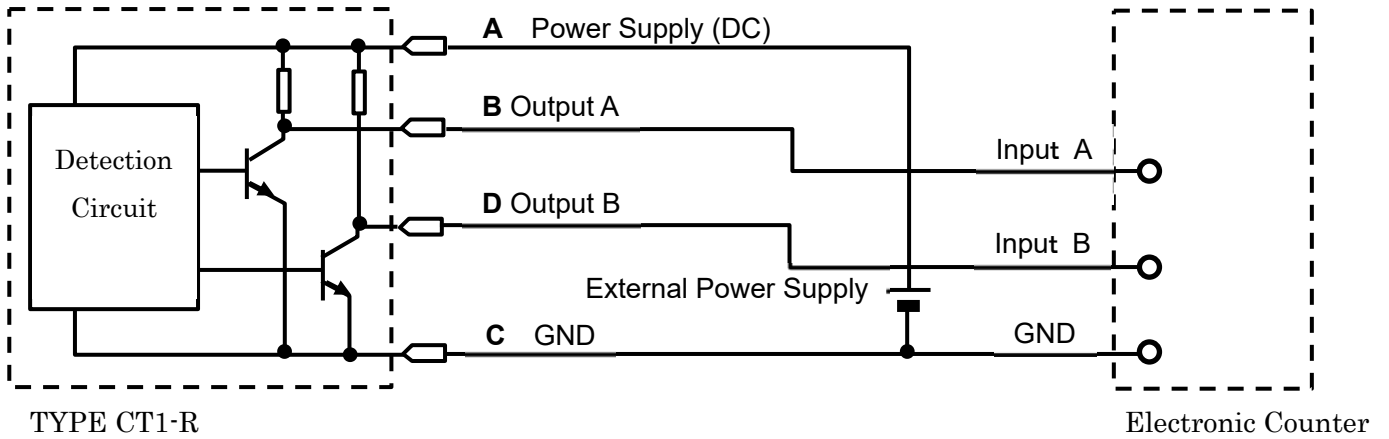
Wiring 3P Connector of CT1-A/CT1-AC to Electronic Counter

Connector		Corresponding Terminal Number of Electronic Counter						
		MD	G48	E48	E60	E10	E21	G90 · G95(*1)
A	Output	4	1	1	1	1	15	2
B	GND	Please connect this pin to the negative pole (-) of external power supply and to a GND terminal of electronic counter.						
C	DC Power Source	The positive pole (+) of external power supply						

NOTE: It is possible to connect CT1-A unit to an electronic counter and make open-collector input, but the voltage of external power source should be 12VDC or more.

*1 If CT1-A unit connects to G90/G95 counter, please select open-collector input by connecting terminals #10 & 11 of G90/G95 counter. The voltage of external power source should be 12VDC or lower.

4. Wiring Diagram: Connect CT1-R / CT1-RC / CT1-RCH to an electronic counter, providing external power source to the CT1 unit



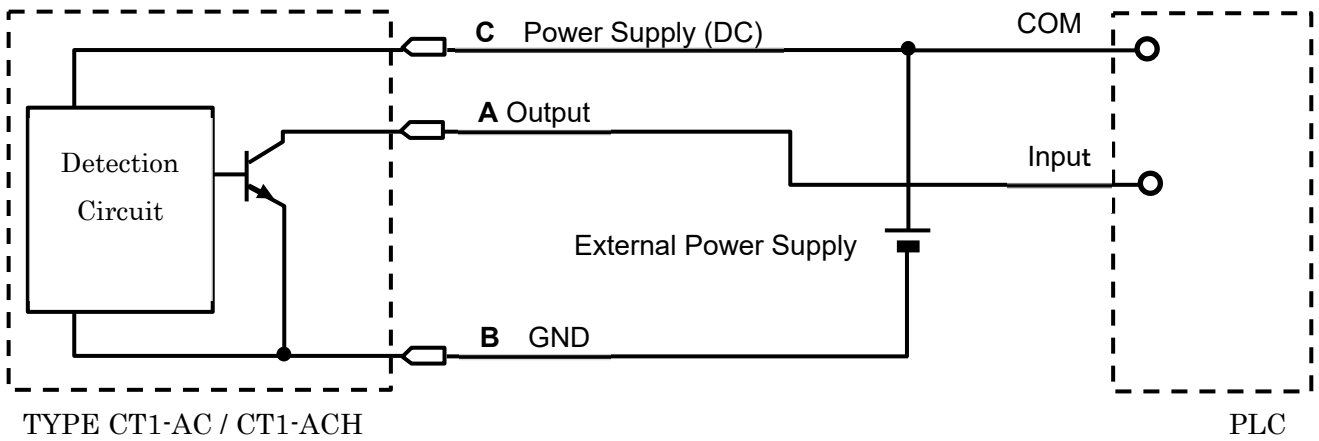
Wiring 4P Connector of CT1-R/CT1-RC/CT1-RCH to Electronic Counter

Connector		Corresponding Terminal Number of Electronic Counter						
		MDR	G48	E48	E60	E10	E21	G90 · G95(*1)
A	DC Power Source	The positive pole (+) of external power supply						
B	Output A	4	1	1	1	1	15	2
C	GND	Please connect this pin to the negative pole (-) of external power supply and to a GND terminal of electronic counter.						
D	Output B	5	2	2	2	2	16	3

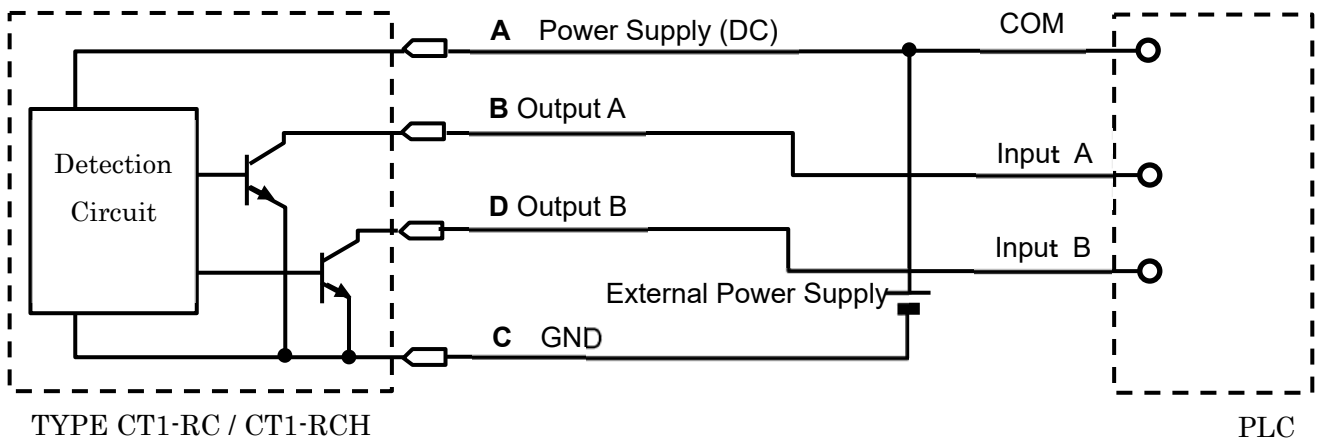
NOTE: It is possible to connect CT1-R unit to an electronic counter and make open-collector input, but the voltage of external power source should be 12VDC or higher.

*1 If CT1-R unit connects to G90/G95 counter, please select open-collector input by connecting terminals #10 & 11 of G90/G95 counter. The voltage of external power source should be 12VDC or lower.

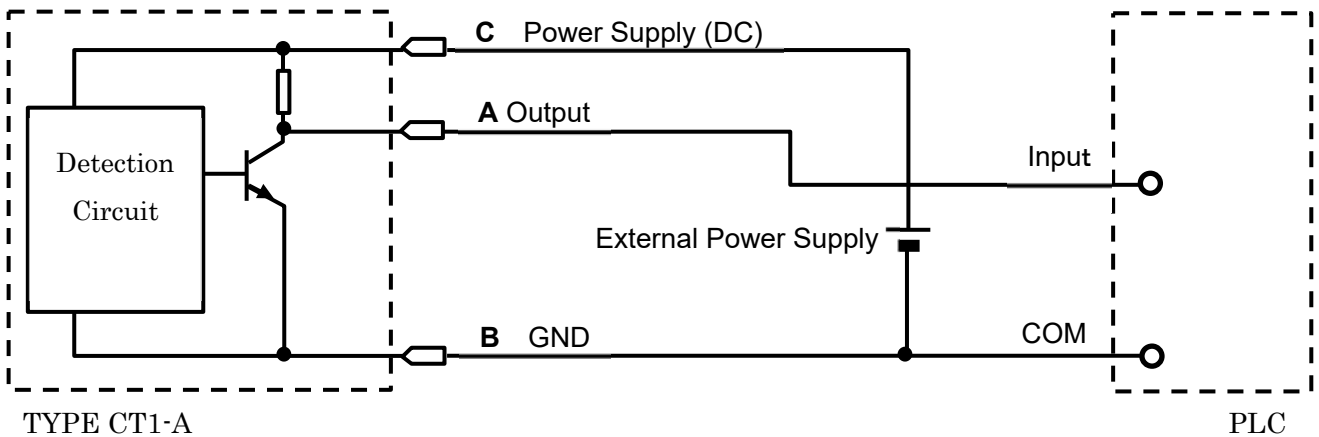
5. Wiring Diagram: Connect CT1-AC / CT1-ACH to PLC, providing external power source to the CT1 unit
Please apply sink input wiring (positive common)



6. Wiring Diagram: Connect CT1-RC / CT1-RCH to PLC, providing external power source to the CT1 unit
Please apply sink input wiring (positive common) of PLC.

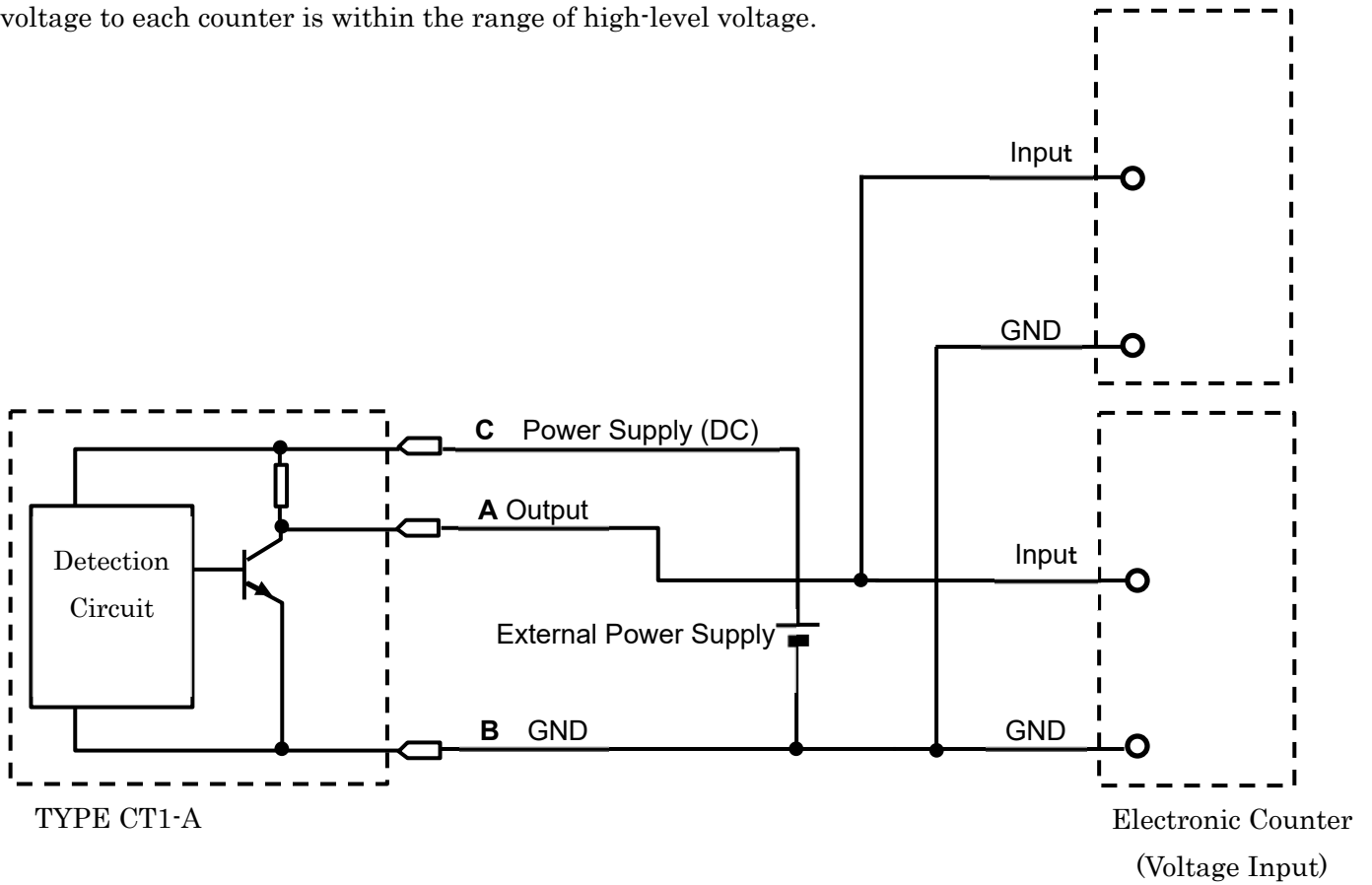


7. Wiring Diagram: Connect CT1-A to PLC, providing external power source to the CT1 unit
Please apply source input wiring (negative common) of PLC.
Depending on power source voltage and/or input impedance, this application sometimes does not work.



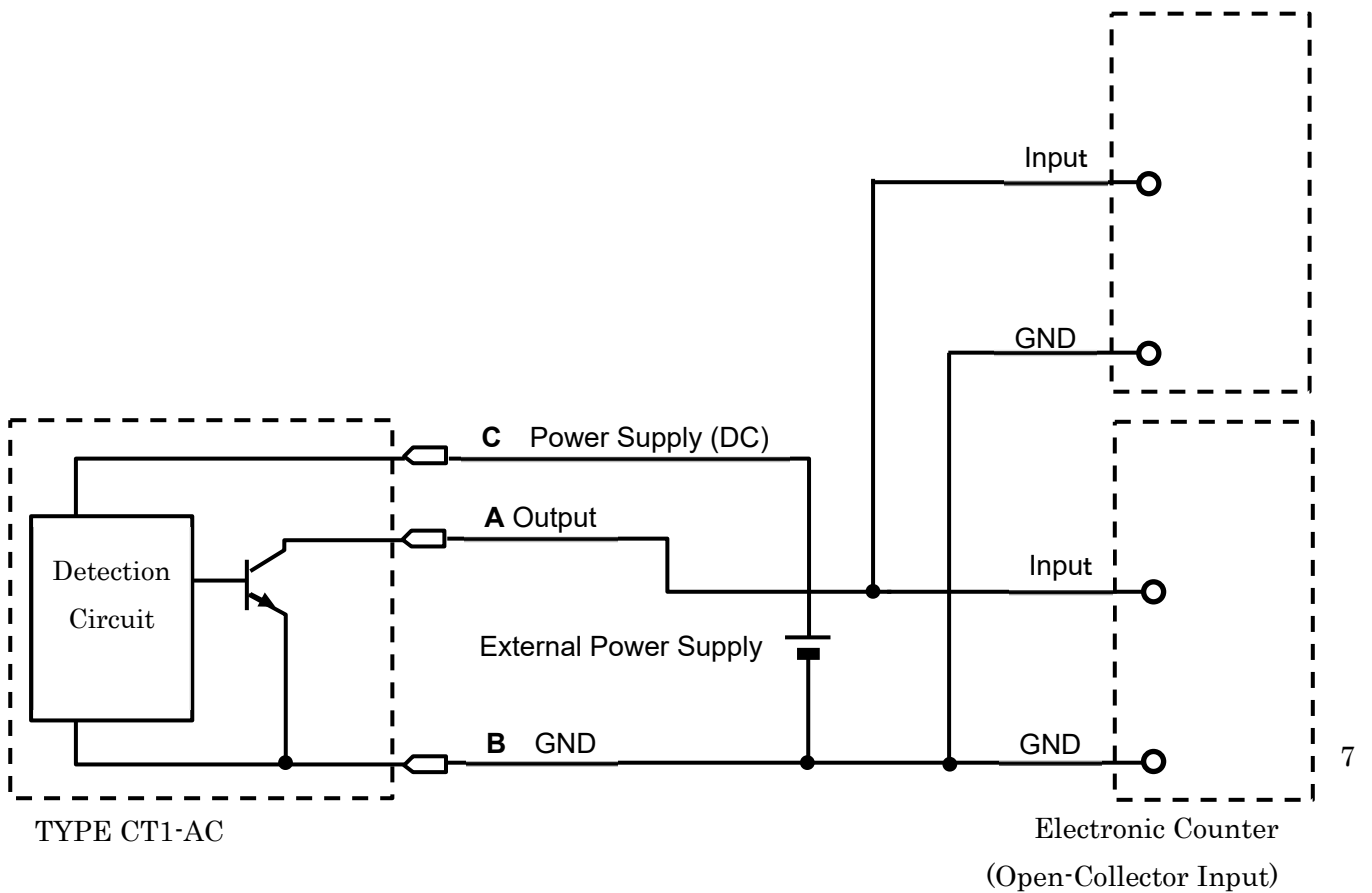
8. Wiring Diagram: Connect CT1-A to two electronic counters in parallel and make voltage input to both counters

Please calculate combined resistance of input impedance of the two counters, and confirm that input voltage to each counter is within the range of high-level voltage.



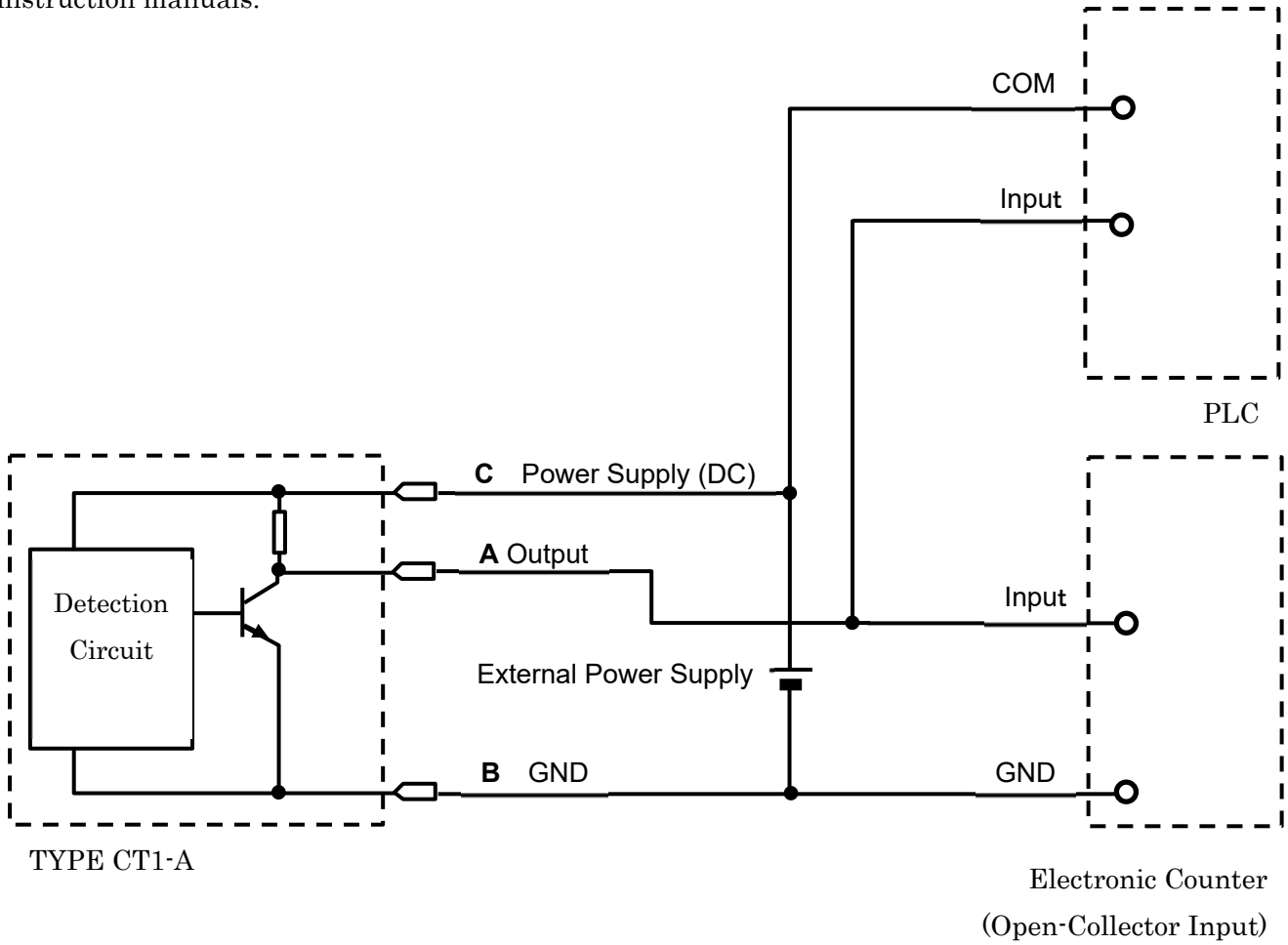
9. Wiring Diagram: Connect CT1-AC to two electronic counters in parallel and make open-collector input to both counters

Please make sure that sink current on CT1 side is larger than the total of source current from the counters.



10. Wiring Diagram: Connect CT1-AC to "one electronic counter" and "PLC" in parallel and make open-collector input to both devices (This application excludes G90/G95 counter.)

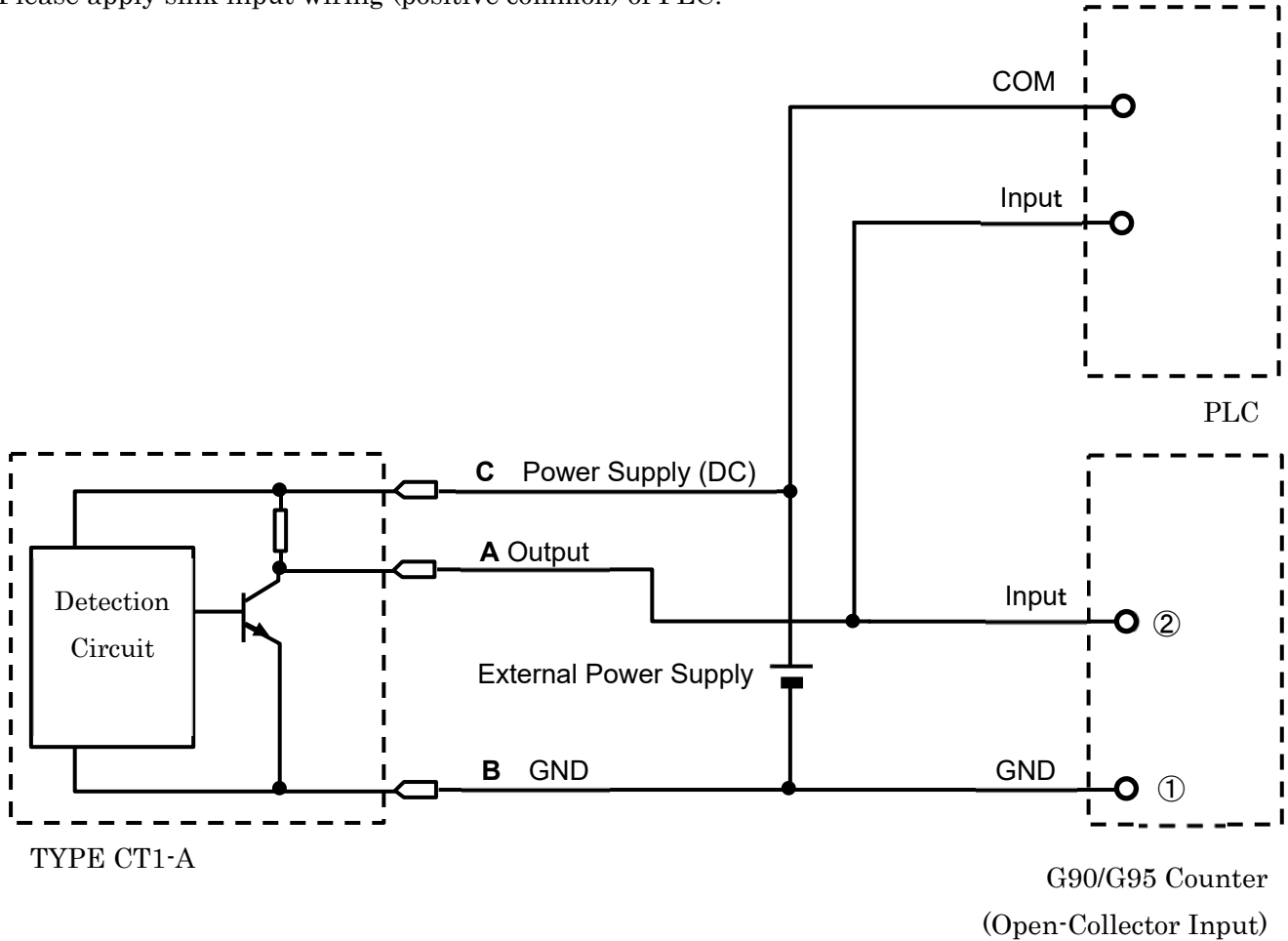
We kindly ask you for your perusal of input specifications and wiring methods described on PLC instruction manuals.



11. Wiring Diagram: Connect CT1-A to "one G90/G95 counter" and "PLC" in parallel and make open-collector input to both devices

We kindly ask you for your perusal of input specifications and wiring methods described on PLC instruction manuals.

Please apply sink input wiring (positive common) of PLC.



NOTE: Please connect terminals #10 & 11 of G90/G95 counter.

NOTE: The voltage of external power source should be 12VDC or lower.