

# 1-ch Low power current source (LPCS) Model: WPC-1ch-LPCS-01

WPC Systems Ltd.

Justin Wu

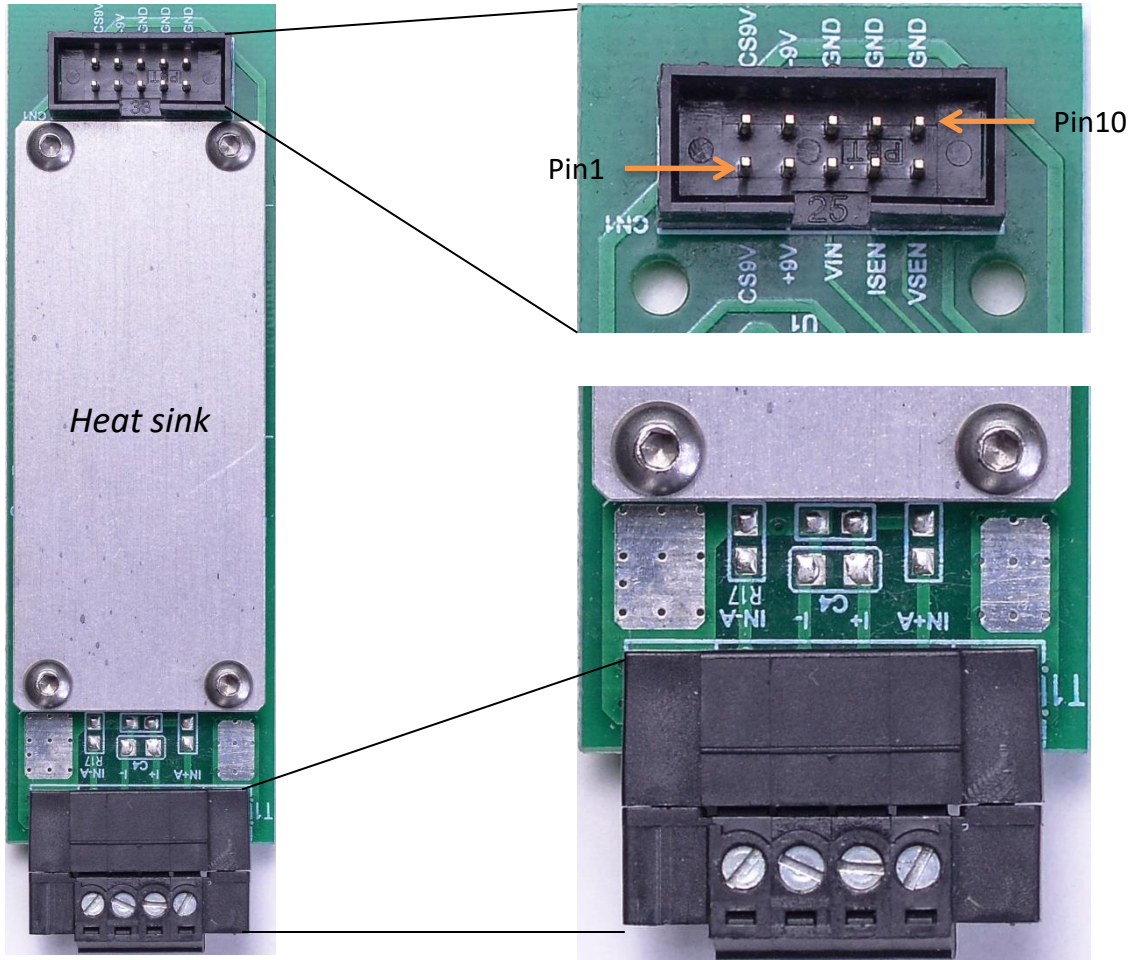
2022-04-30



# Specification

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Description
Voltage input range	V <sub>in</sub>	V <sub>cs</sub> =12V	0		5	V	
Voltage input threshold	V <sub>th</sub>		20	40	50	mV	
Current output range	I <sub>out</sub>	V <sub>cs</sub> =12V	0		200	mA	
Current source input power	V <sub>cs</sub>		5	9	12	V	
Sense amplifier input power	V <sub>cc</sub>		7	12	15	V	At least 2V larger than V <sub>cs</sub>
V <sub>sens</sub> output range	V <sub>sens</sub>	V <sub>cc</sub> =±15V		10	12	V	2V less than V <sub>cc</sub>
I <sub>sens</sub> output range	I <sub>sens</sub>	V <sub>cc</sub> =±15V		10	12	V	
Current output precision				5	10	µA	

# Pin assignment

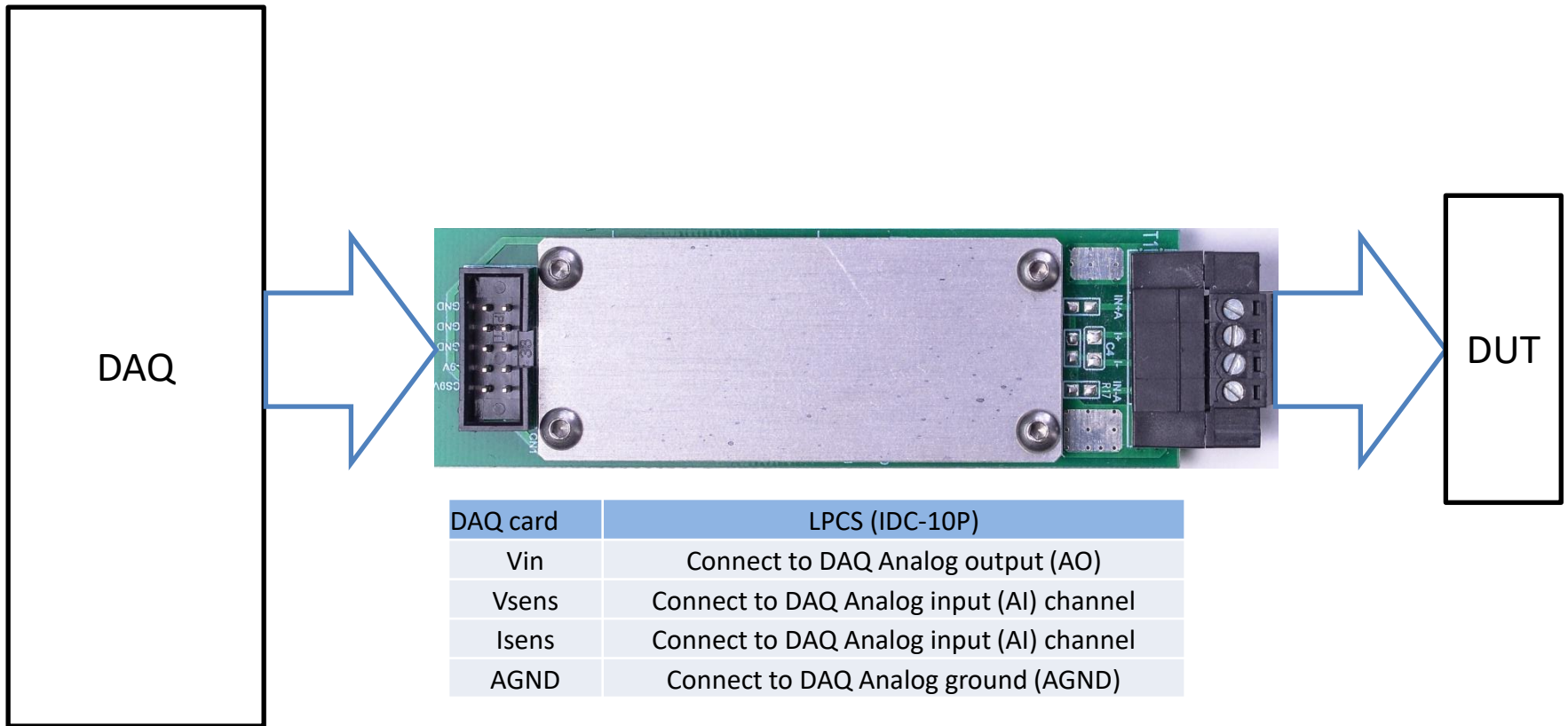


Pin#	Name
1	Current source power in+
2	Current source power in+
3	Sense amplifier power in+
4	Sense amplifier power in-
5	Current Control Voltage in+
6	AGND
7	Current sense voltage out+
8	AGND
9	Voltage sense voltage out+
10	AGND

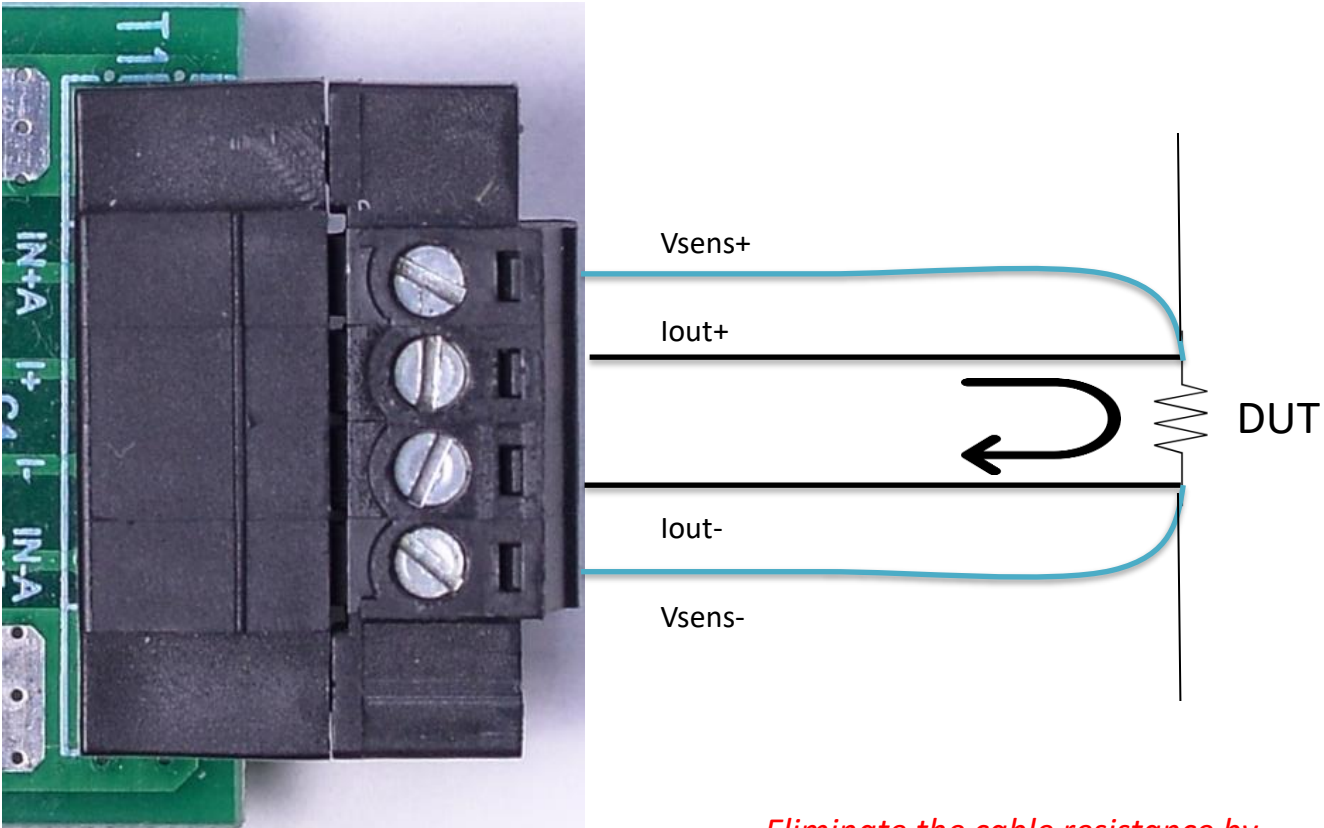
Pin#	Name
1	Vsens-
2	lout-
3	lout+
4	Vsens+

1 2 3 4

# Connection diagram

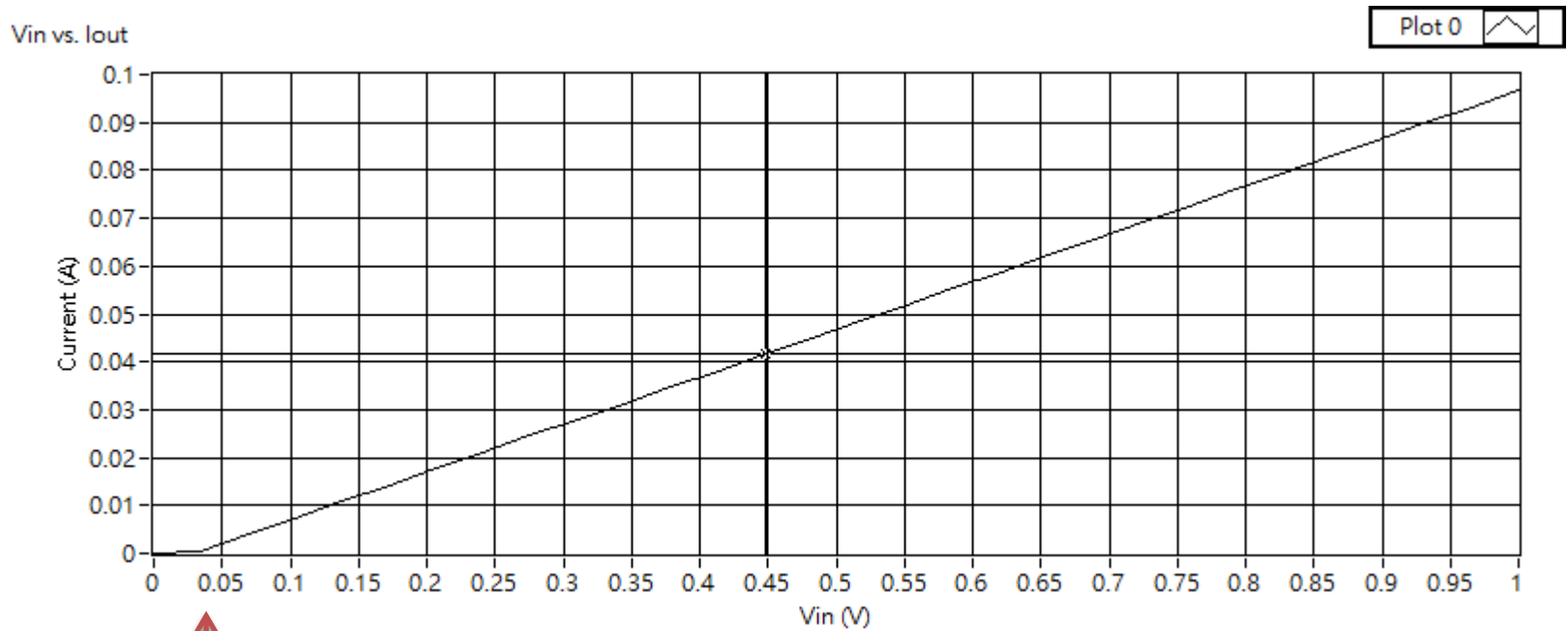


# Contact resistance (CR) measurement



*Eliminate the cable resistance by  
using 4-wire sensing technique.*

# Vin vs. Iout curve



↑  
*Threshold voltage < 40mV*

# 2ch 電流源専用電源供應器



**Model: WPC-2ch-Power-LPCS-01**

Support: WPC-1ch-LPCS-01 x 2

Current out control: 0-5V

Voltage/current sense: 0-5V

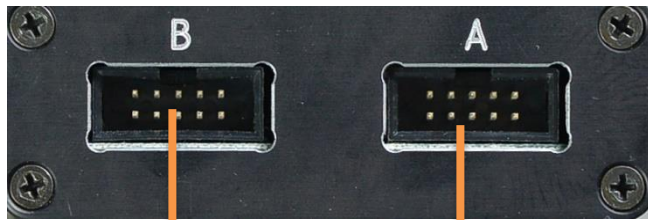
Power In: 24VDC

Power Out: +/-12V high (isolated)

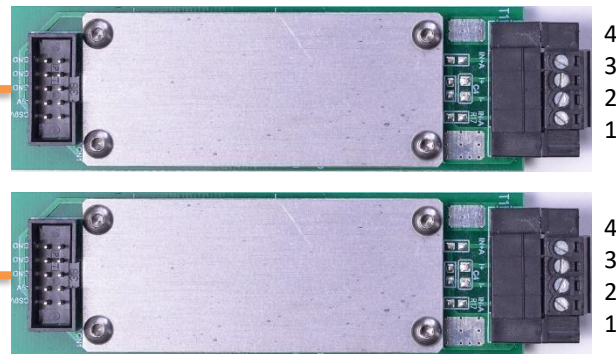
# Front view



front view



WPC-LPCS-01



IDC-10P ribbon cable

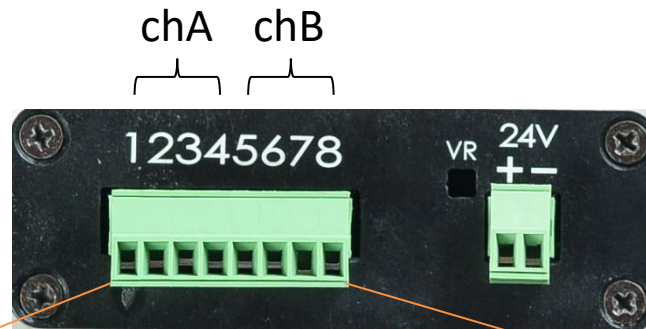
Pin#	Name
1	Vsens-
2	lout-
3	lout+
4	Vsens+



# Rear



back view



Pin#	Chan	Name	Description
1	A	Vsens	Sense voltage (0-10V out)
2		Isens	Sense current (0-10V out)
3		Ictrl	Control current (0-5V in)
4		GND	AGND for Chan A
5	B	Vsens	Sense voltage (0-10V out)
6		Isens	Sense current (0-10V out)
7		Ictrl	Control current (0-5V in)
8		GND	AGND for Chan B