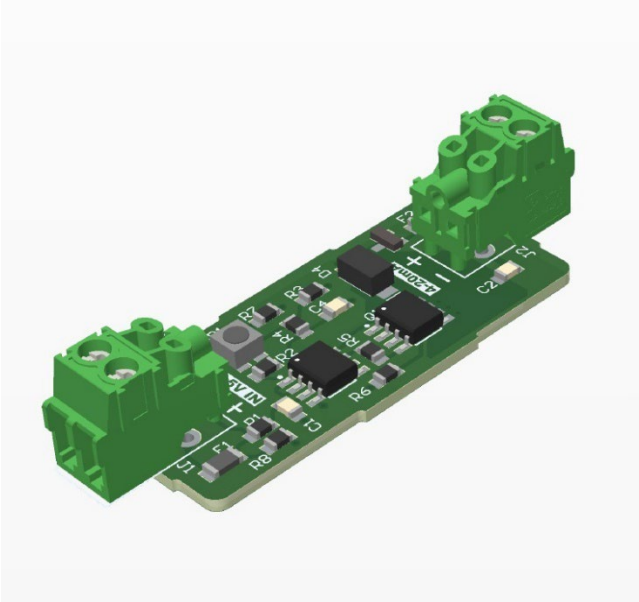
TOKYO DEVICES

TDFA6075P

1-5V Input, 4-20mA Output, 2-wire Current Sink, Analog Signal Converter

Revision 1.0



TDFA6075P is a signal converter that converts voltage signals in the range of 1-5V to current signals in the range of 4-20mA. It is suitable for industrial sensors with current or voltage analog signals.

IMPORTANT NOTICE

Tokyo Devices, Inc. and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Tokyo Devices, Inc. and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Tokyo Devices, Inc. and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application. Any contents of this document are subject to change without notice.

注意事項

東京デバイセズ株式会社(以下、当社)は本製品が本文章で示す設計上の精度・性能を完全に満たすことを保証しません。また当社は、本製品がお客様のアプリケーションに実装された場合に正しく動作することを保証しません。組込み・実装する場合には、お客様の責任において十分な試験・検証を行ってください。本製品は人命や財産に重大な損害が予想される用途には使用できません。本製品を使用することで生じた損害（お客様または第三者いずれに生じた損害も含みます。）に関して当社は一切その責任を負いません。本文章の内容は予告なく変更される場合があります。

目次

TDFA6075P 1
1. Specifications 4
2. Board Layout 4
3. How to Use 5

1. Specifications

Name	Value	Notes
Input Voltage Range	1-5V	
Min. Input Voltage	-0.3V	
Max. Input Voltage	5.5V	
Input Resistance	100kΩ	
Power Supply Voltage	24V	
Output Current Range	4-20mA	*also serves as power consumption
Accuracy	1 FS%	*Vin=24V
Frequency Response	> 1KHz	*-3dB
Terminal Contact	Screw terminal (M2)	
Wire Compatibility	0.2-1.5mm², 16-24 AWG	
Surge Protection	Yes	
Reverse Protection	Yes	
Operating Temperature Range	-10～55℃	
Dimensions	TBD	

2. Board Layout

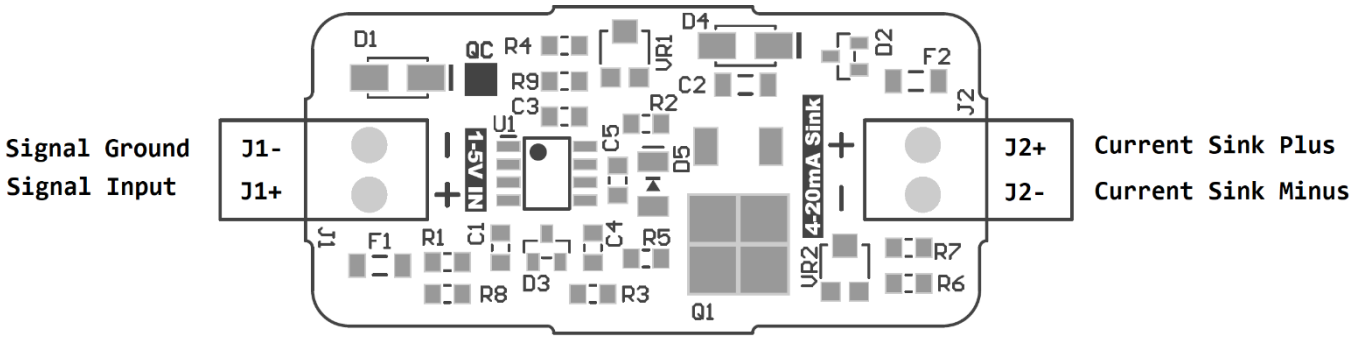


Figure 1 Board Layout

Table 1 Pin Assignement

Symbol	Name	Description
J1	J1-	Signal Ground
J1	J1+	Signal Input (1-5V)
J2	J2-	Current Signal Output (Minus)
J2	J2+	Current Signal Output (Plus)

3. How to Use

1. Prepare a 24V DC power supply and a DC ammeter. Connect the power supply's positive terminal (+) to the ammeter's positive terminal (+), then connect the ammeter's negative terminal (-) to J2+ on TDFA6075P, and finally connect J2- on TDFA6075P to the power supply's negative terminal (-).
2. Prepare a variable voltage source or signal generator capable of producing an output voltage in the range of 1-5V. Connect this voltage source to J1 on TDFA6075P.
3. Apply a voltage within the 1-5V range to J1 and observe the current value on the ammeter. Verify that the current value changes proportionally to the applied voltage.