**ICP Electronics
Australia Pty Ltd**

TEL: 02 9457 6011
sales@icp-australia.com.au
www.icp-australia.com.au

SG-3784M

4-channel DC Current Input Signal Conditioner

Features

- 4-channel 4 ~ 20mA Current Input to 4-channel PWM Output
- Accuracy: ±0.1% of Full Range
- Easy PWM Frequency configuration
- 4kV ESD and EFT Protection
- 2.7-inch LCD simultaneously displays PWM signal duty ratio and frequency
- 4-button easy configuration of PWM signal

Introduction

The SG-3784M is a 4-channel DC current input signal conditioning module which can convert 4 ~ 20 mA current input to PWM output. This provides an economical solution when the 4 to 20mA current need to be converted to PWM output. The duty cycle, 0% to 100%, of the PWM output is a linear transformation of the 4 to 20mA current input. The frequency of the PWM signal can be in the range 600Hz to 800Hz and it can be adjusted by buttons.

The SG-3784M includes a monochrome graphic LCD display which shows the duty cycle and frequency of the 4-channel PWM output signals. 4 kV ESD and 4 kV EFT protection are also provided to enhance noise protection capabilities in industrial environments.

Applications

- Heating system in buildings
- Ventilation system
- Controlling servo-assisted diaphragm valve

System Specifications

Display	
Type	Monochrome Graphics LCD (46x48 mm Viewing Area)
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
EFT (IEC 61000-4-4)	±4 kV for Power Line
LED Indicators	
Status	1 x Power and Communication
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +30 VDC
Consumption	0.1 W (Typ.) 96.2 W Max. (Note1)
Mechanical	
Dimensions (mm)	97 x 121 x 36 (W x L x H)
Installation	DIN-Rail or Wall Mounting
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

Note1: At same time four channles PWM output 1A@24V at 100% duty cycle.
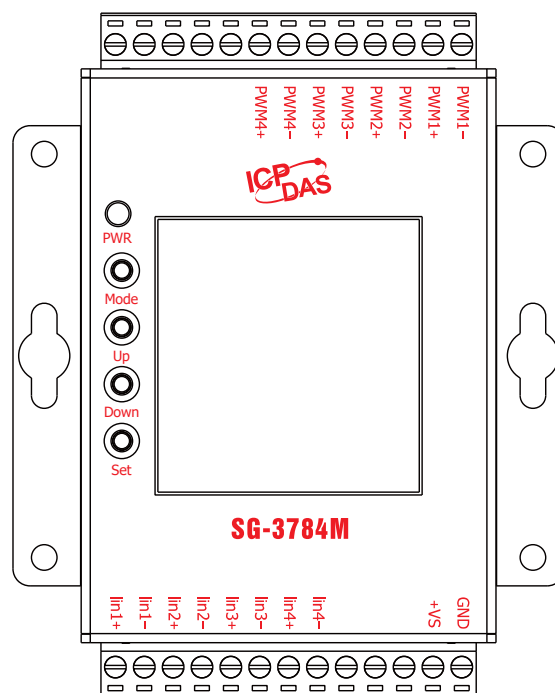
I/O Specifications

Analog Intput	
Channels	4
Range	+4 ~ +20 mA
Accuracy	±0.1% of full range
Range	1 kHz
Input Impedance	137 Ω
PWM	
Channels	4
Type	PWM
Sink/Source (NPN/PNP)	Source
Load Current	+24 VDC @ 1 A/Channel (Note2)
Frequency	600 ~ 800 Hz
Duty Cycle	1 to 100%
Mode	Continuous

Note2: The PWM output voltage is linked with the power input voltage of the module.
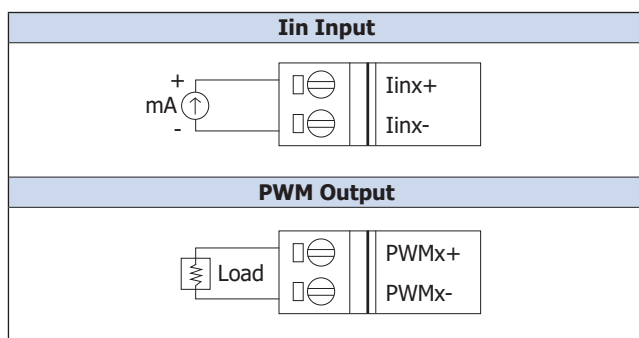
Internal I/O Structure
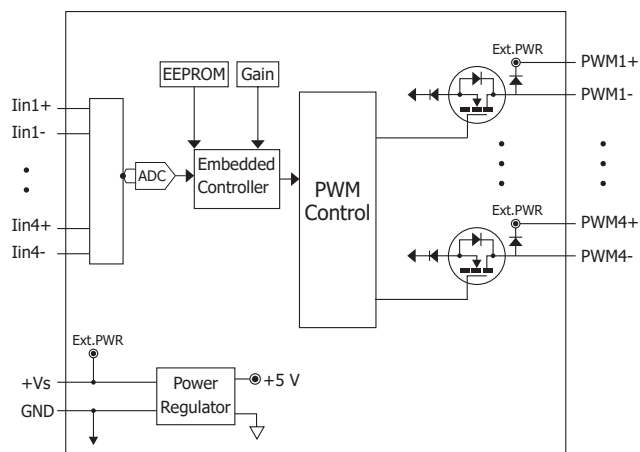

Pin Assignments/Appearance

SG-3784M

PWR	The power LED of the module
Mode	Press MODE to modify the channel frequency, the channel frequency flashes. Long press MODE to modify the four-channel frequency at the same time, and the four-channel frequency flashes.
Up	Press UP to increase the frequency, long press to increase quickly.
Down	Press DOWN to decrease the frequency, long press to decrease quickly.
Set	Press SET to save the modified value. If only one channel is modified, it will switch to the next channel. If it is to modify the four channels, stop the modification. Press MODE during the modification to stop the modification.

Wire Connections

Dimensions (Units: mm)

Left View

Front View

Right View

Rear View

Top View

Bottom View
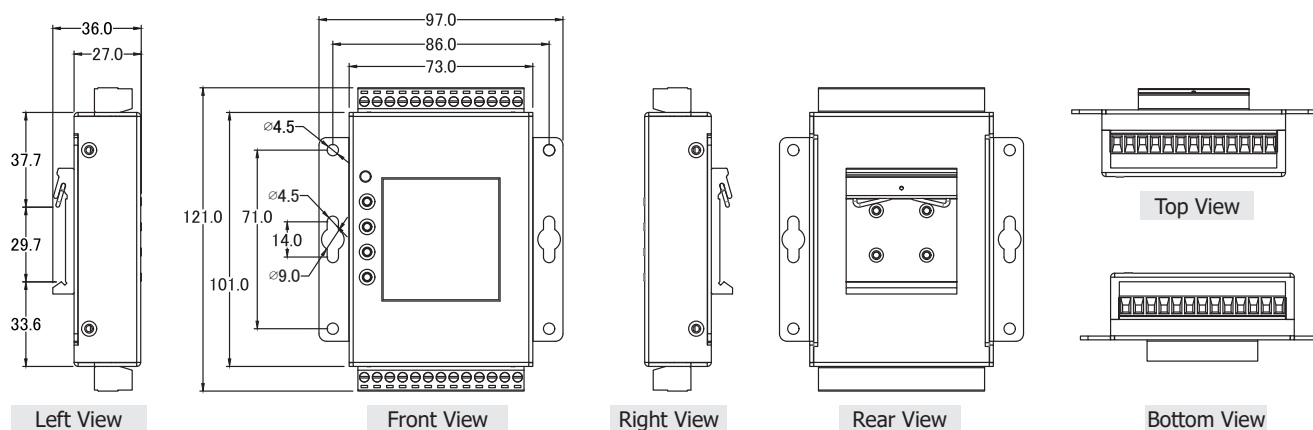
Ordering Information

SG-3784M CR	4-channel DC Current Signal Input to 4-channel PWM Output Module (RoHS)