



SG-3784M

4-channel DC Current Input Signal Conditioner



Introduction

The SG-3784M is a 4-channel DC current input signal conditioning module which can convert $4 \sim 20$ 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



System Specifications

Display		
Туре	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
Туре	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



Wire Connections



Pin Assignments/Appearance



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.



Dimensions (Units: mm)

Ordering Information

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